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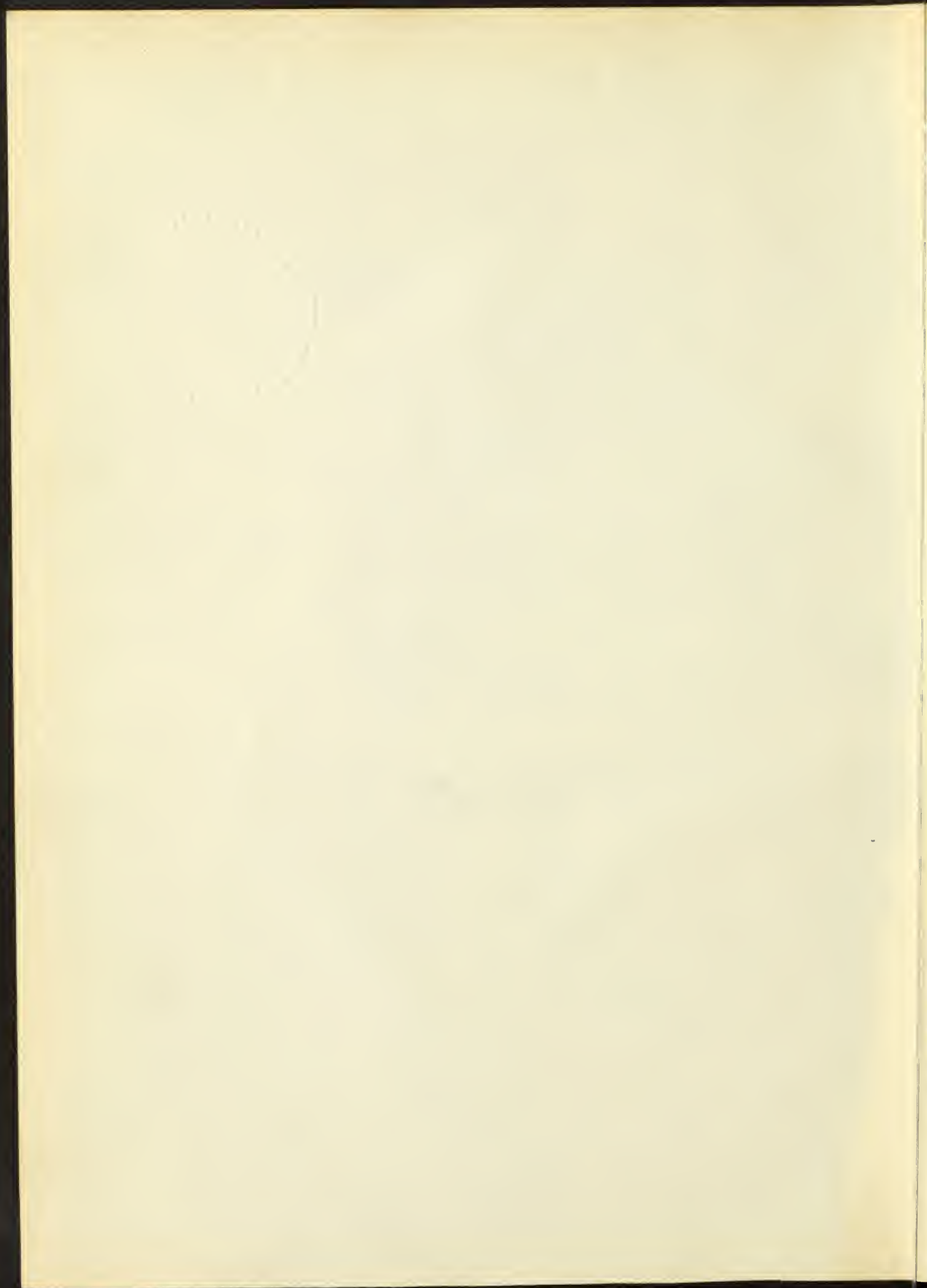
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by

Ralph H. Clapp



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Introduction

The purpose of this paper is to describe and discuss the problems and methods of underwriting the aviation hazards. It presupposes a knowledge of the general principles of insurance, and, therefore, treats only of the recent practices of insurance companies.

The paper is divided into two sections. The first deals only with life insurance and aviation, and the second with the other kinds of aviation insurance, offered by fire and liability insurance companies.

Aviation insurance is so young that little has been written upon the subject. The material for this paper has been taken chiefly from information furnished by insurance companies, and reports of studies made by special committees on aviation insurance. Of particular value was a study of the death rate and the hazard of flying, in relation to life underwriting, made by Capt. Ray A. Dunn, of the United States Army Air Corps, under the auspices of The Daniel Guggenheim Fund for the Promotion of Aeronautics, Inc.

The writer is also especially indebted to Mr. David C. Beebe, President of the United States Aviation Underwriters, for his kindness in furnishing material and information in connection with aviation insurance, written by fire and liability companies. The organization, of which Mr. Beebe is President, was formed in 1928 and acts as aviation underwriters for a large group of fire and liability companies.

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Insurance and Aviation

Part I

Life Insurance and Aviation



Life Insurance and Aviation

The aviation industry has been progressing so rapidly, in recent years, that associated industries have found it difficult to keep pace. This is particularly true in the case of life insurance, because its relation to aviation has been further complicated by the lack of adequate statistics for establishing experience tables as a basis for rates. The theory of life insurance is so dependent upon the law of averages, over a sufficiently long period of time, that companies find it very difficult to adjust rates to fit the aviation hazard, when the experience has been so limited. Another factor which makes underwriting difficult is the constant change which is taking place in airplane construction and the rapid increase in the use of air transportation.

From an insurance angle, aviation risks are many and varied. There are pilots of various classes, qualifications, and experience, and individuals who are habitual passengers, others who fly several times a year, and still others who make only occasional pleasure flights. In studying the aviation hazard, our first problem is to classify these various risks into groups suitable for underwriting purposes. In this study the risks will be divided into two general groups, pilots, and passengers.

A. Pilots

Pilots may be classified according to the type of license held. The highest class of pilots includethose

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holding the federal transport pilot's license. The transport pilot must have had at least 200 hours of solo flying of which five hours must have been within the last preceding sixty days prior to making application. The transport pilot's license specifies what type of licensed plane he is qualified to operate, but does not permit him to operate unlicensed aircraft carrying persons or property for hire. Transport pilots have all the privileges of navigating aircraft conferred upon other classes of pilots which includes the right to instruct students in the operation of aircraft in flight.

The next lower class is of limited commercial pilots. Their flying requirements are the same, but they are not permitted to pilot aircraft carrying persons for hire outside of the areas mentioned in the license, nor, for hire, instruct students.

The next class is that of industrial pilots who are required to have only fifty hours of solo flying and they may pilot any type of licensed aircraft not carrying persons for hire, but shall not pilot unlicensed aircraft, carrying either persons or property for hire, or instruct students.

The fourth class is that of private pilots who must have had ten hours of solo flying, at least two in the last sixty days prior to application, and they are not entitled to carry either persons or property for hire.

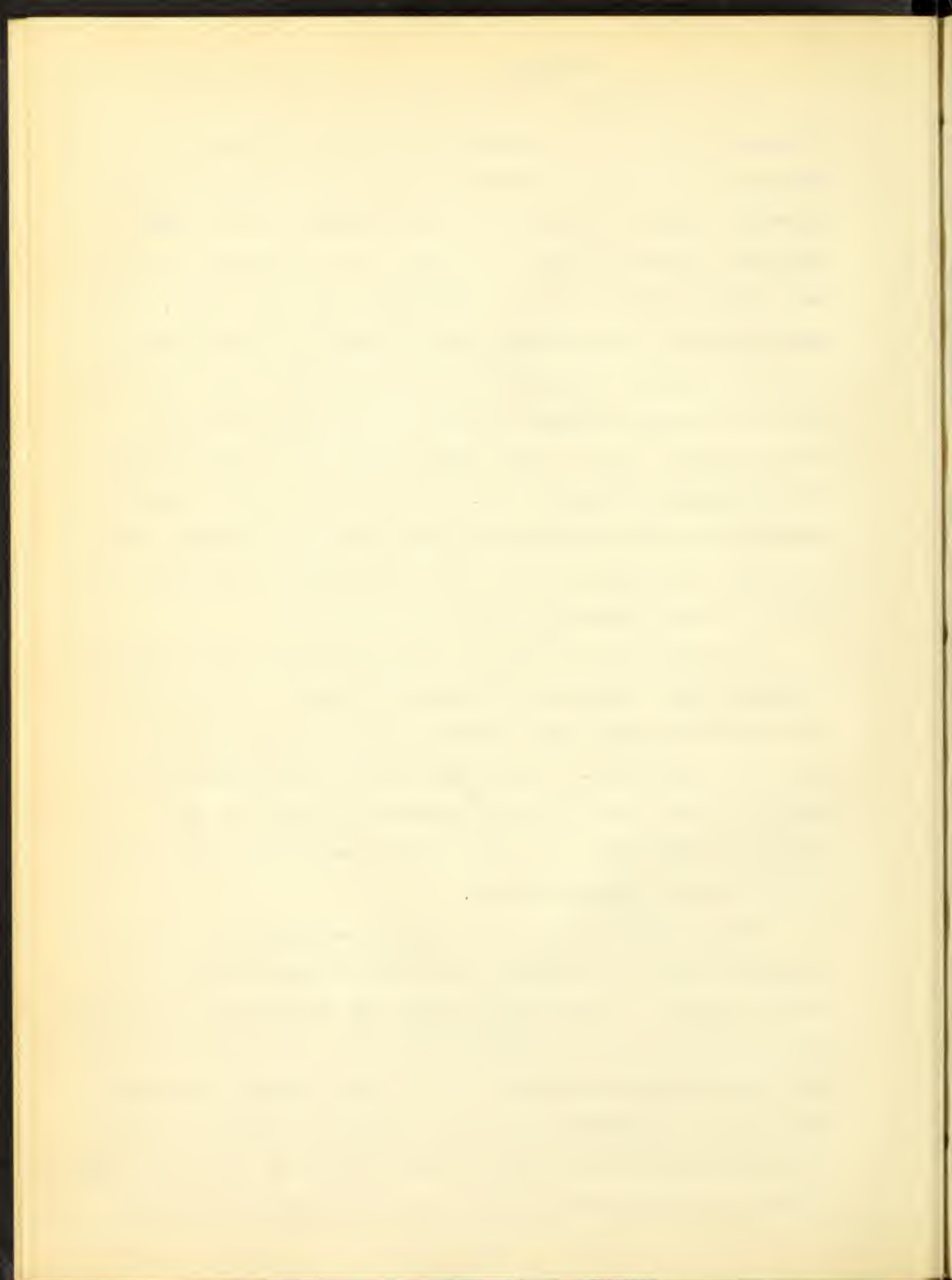
The Federal Government also issues student permits which enable persons who are physically qualified to receive instruction, but not to pilot a plane alone.

Hazards

The most difficult problem with which life insurance companies are faced in insuring the lives of pilots, is to determine the degree of hazard to which each class is exposed. It seems logical to believe that those pilots who hold the transport pilot's license, for which the requirements are the most rigid, would be the most desirable insurance risks. Some companies have proceeded upon that assumption in establishing rates for pilots. Accurate statistics, however, show that the death rate among transport pilots is higher than among the other classes. For the year 1930 the death rate per thousand among transport pilots was 34. The death rate among limited commercial pilots was about half that for the transport class, and among the private pilots the death rate was about half that of the limited commercial pilots.

The surprising difference in the death rate in the classes of pilots just mentioned is explained by the fact that transport pilots do enough more flying to offset their greater skill and experience. The average private pilot apparently does so little flying in comparison that in spite of his lower qualifications, his death rate is much lower than that of the average transport pilot.

None of these classes are entirely homogeneous. In the transport class, for example, there are at one extreme, the pilots engaged in experimental work, like Lindbergh, Chamberlain, and the other internationally known flyers, and test pilots of the manufacturing companies. At the other extreme, there are some private individuals who have acquired a transport license for the satisfaction of doing it, and others who were full time flyers at one time, but now hold executive jobs with aircraft



companies and do only enough flying to maintain their transport license.

In 1930 there were approximately 5,000 licensed transport pilots of which about one tenth were engaged in scheduled air mail or passenger service. The death rate among this group was 50 per thousand per year as compared with 34 for the entire transport class. The higher death rate among scheduled air route pilots is due to the fact that they are in the air longer and, therefore, are more exposed to the hazards of flying. Of the transport class the air mail pilot presents the greatest risk, from an insurance standpoint, since he flies in all kinds of weather, and during the night.

The importance of experience in flying is well illustrated by the fact that the death rate in 1930 among transport pilots with less than 400 hours of flying time was 79, and among those with more than 400 hours, 29. The majority of the regular air lines will not employ pilots with less than 1500 to 2000 certified hours experience.

In the class of limited commercial pilots, whose privileges are more restricted, the exposure was quite good but the death rate was lower than that of the transport class. The explanation seems to be that the flying time was less. The limited commercial pilot is more of a part time pilot. He flies when there is work. His work is not as regular as the transport pilot. As his work increases until it more nearly approaches that of the transport pilot his mortality rate undoubtedly will rise.

From this brief observation it is very evident that estimates regarding the pilot risk are often erroneous for life insurance purposes. The number of hours or miles flown

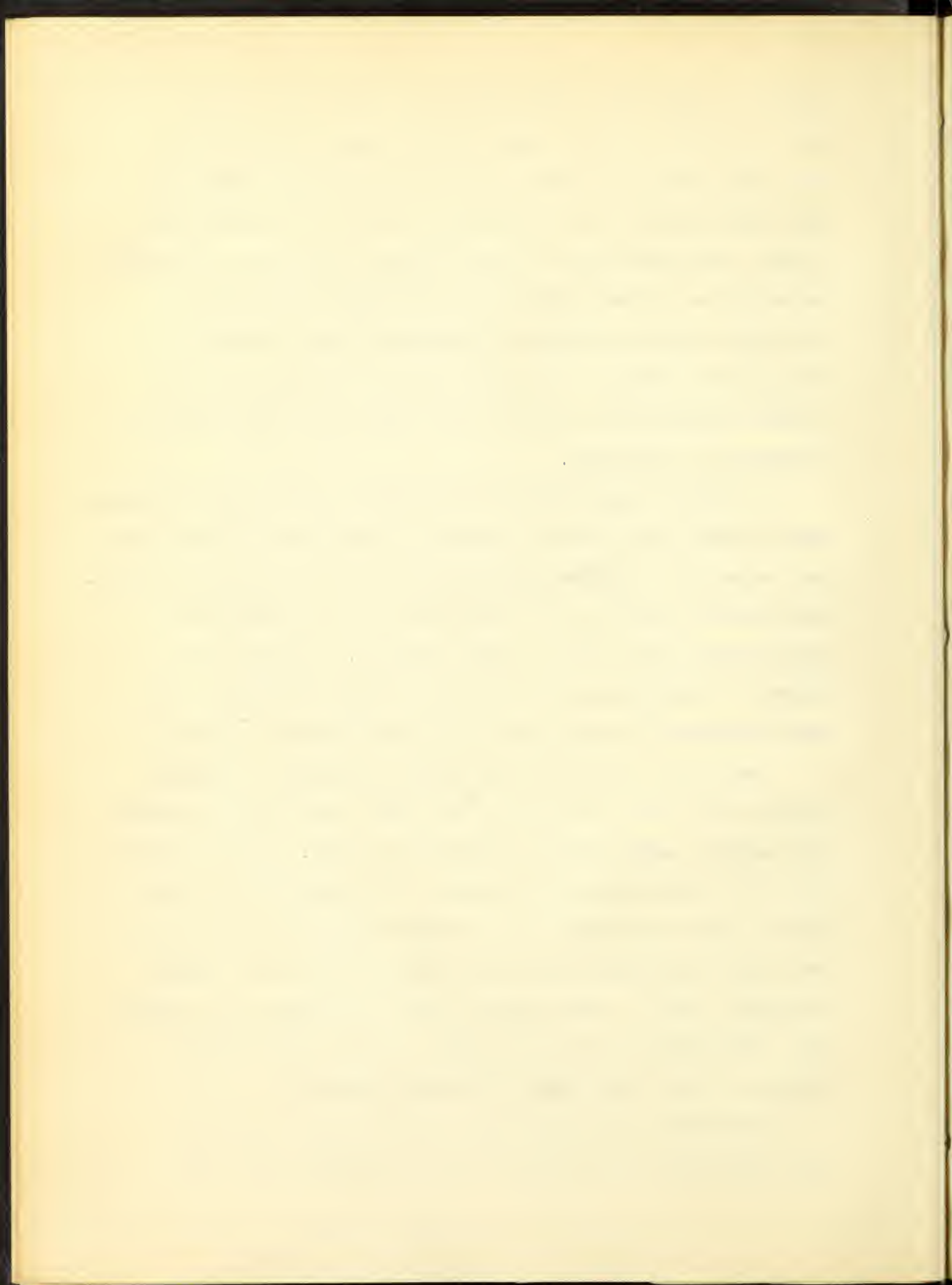


during the year has a very direct and important bearing upon the risk involved. Not only the type of license but the flying time of a pilot should be considered. And even this information is not conclusive to the life underwriter. A pilot now doing taxi work may become a pilot on a scheduled passenger or air mail route, as new routes are added or additional planes assigned to existing routes, thereby changing his status. Frequent changes of this sort would render worthless the original data upon which the pilot was accepted for insurance.

A study of commissioned Army officers with flying ratings, over a seven year period, revealed a death rate of 20 per year per thousand. A better showing than that of transport pilots. Supervision, training, and regulation is, no doubt, more rigid in the army than in civil aviation. Flying time, however, is much less, so that all factors considered, the death rates of the two groups would more nearly coincide.

Statistics of the Navy Department revealed a slightly higher death rate than that of the Army, over the same seven year period, namely 25 per thousand per year. In the Marine Corps the rate was 50 per thousand. The high rate in the Marine Corps was probably due to the unfavorable conditions over which the Marine pilot was forced to fly, for example Nicaragua, and the other places where the Marines are called into duty and where there are few, if any, good landing fields or other facilities for flying machines.

Officials of the Navy air forces believe the death rate among them should be as low, if not lower, than the



death rate in the Army, since water provides a greater area upon which to alight. Here again flying time might be the factor which would alter the rate somewhat.

In Chart I, on the following page, is a table of mortality experience for pilots of the various classes. Prior to the year 1927 little information was recorded concerning aviation mortality statistics. Insurance companies must depend upon the record of recent years for accurate data. A study of the chart reveals considerable irregularity in the death rate of pilots for the period covered. The tendency is toward an increased annual death rate, which is surprising, perhaps, at first glance, but which is due to the increase in amount of flying done.

Chart II classifies the deaths of transport pilots according to the kinds of flying in which death occurred. Miscellaneous pleasure flying claimed the largest number of pilot deaths. The class includes non-scheduled flying and flying over other than established air routes where a forced landing might be disastrous. Also transcontinental and transoceanic flying. Twenty-three deaths occurred in scheduled flying; flying over established air routes with landing facilities at regular intervals. This class includes air mail pilots who must fly, at times, under adverse weather conditions, and at night, in order to maintain their schedule. The amount of flying time, which is large in this class, also contributes to a high death rate. Deaths occurring in miscellaneous commercial flying are lower, chiefly, because the flying time is less. Pilots in this group fly only when there is work. Student instruction and experimental flying accounted for the least number of fatalities. The inexperience in flying,



CHART I

Experience Table of Pilot Mortality

Licensed Transport Pilot

Year	Number Active	Number of Fatalities	Death Rate per Thousand
1927	943	19	20
1928	3176	69	21
1929	3591	121	34
1930	5792	197	34

Licensed Limited Commercial Pilot

Year	Number Active	Number of Fatalities	Death Rate per Thousand
1927	261	1	4
1928	537	11	20
1929	1443	21	14
1930	1957	14	7

Licensed Industrial Pilot

Year	Number Active	Number of Fatalities	Death Rate per Thousand
1927	32	0	None
1928	99	2	20
1929	103	1	9
1930	98	1	10

Licensed Private Pilot

Year	Number Active	Number of Fatalities	Death Rate per Thousand
1927	346	1	2.8
1928	1075	8	7.4
1929	4162	29	6.9
1930	7433	37	4.9

CHART II

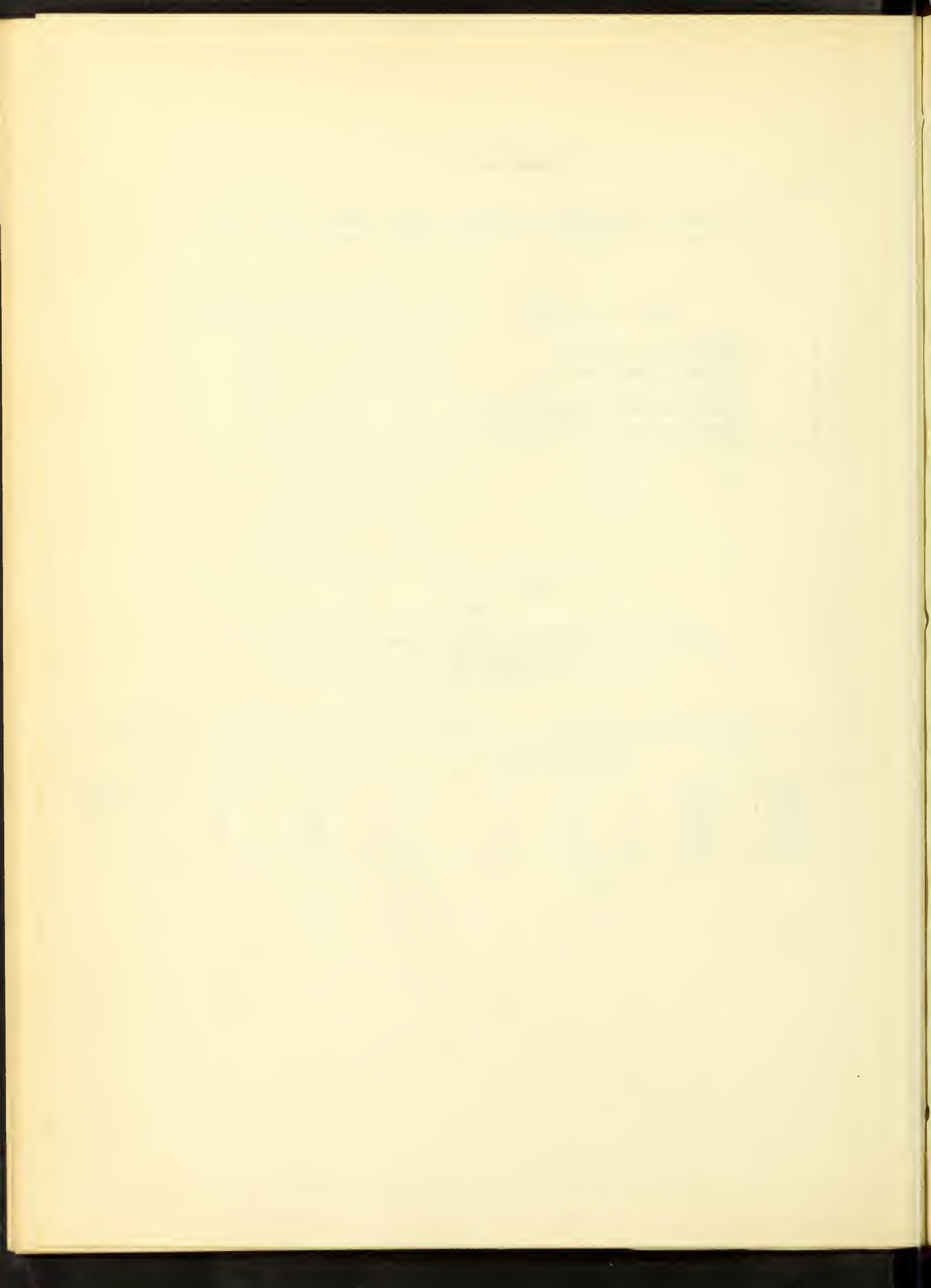
Deaths of Transport Pilots Classified According
to Kinds of Flying in Which Death Occurred-1929

Kind of Flying	No. of Deaths
Scheduled Flying	23
Student Instruction	18
Experimental	10
Miscellaneous Commercial	19
Miscellaneous Pleasure	26

CHART III

Number of Aviation Fatalities separated into
Classifications by Class of Pilot
Involved

Year	Transport	Limited Commercial	Industrial	Private	Student	Unlicensed
1927	37	1	0	1	0	125
1928	168	26	4	18	12	156
1929	121	21	1	29	--	--
1930	197	14	1	37	--	--



in these two classes, is offset by the fact that flying is usually confined to the territory immediately surrounding an airport, and within gliding distance of good landing facilities.

Chart III divides the aviation fatalities over a 3 year period into classifications by class of pilot involved. This chart bears out previous statements that the greater number of fatalities occur among the classes which do the most flying. The one exception is the unlicensed pilot class. We do not know how much flying time is represent nor the death rate among unlicensed pilots. It seems reasonable to presume, however, that the death rate is very high in proportion to flying time, due to lack of proper training and experience.

In considering the insurability of Army pilots, it is not possible to divide them into groups, because each one does flying of different kinds. Army pilots must be considered as a group.

With the exception of a very small number, all Air Corps commissioned officers have aviation ratings, chiefly that of pilot. About 75% of the total Air Corps commissioned strength have had more than ten years' flying experience.

The training course for a military airplane pilot rating requires one year at an Air Corps flying school, with an average per student of 250 hours of flying.

All Air Corps flying officers are required to pass a rigid physical examination twice a year, and after prolonged periods of absence from flying duty. Also after any accident, sickness, or confinement. Failure to pass the physical examination bars the officer from further flying duty.

There are four major types of flying required of Army



Air Corps pilot; Pursuit, Bombardment, Attack, and Observation. Other miscellaneous types of flying are also performed. No measure of the relative hazard of the four major types of flying can be determined. All appear to average equally.

Chart IV presents a six years mortality experience for Regular Army Air Force Officers. The chart indicates clearly the improvement in the death rate during the period covered. The Army Air Corps maintains the best training schools for pilots. It is working constantly toward improvement of equipment and in the maintenance inspection systems. It is continually experimenting with new types of engines, airplanes and navigation instruments. The improvement in construction and in airworthiness of the Air Corps equipment is reducing the number of fatalities, as evidenced in Chart IV.

In the Navy Air Service about 75 per cent of the commissioned personnel hold aviation flying ratings, chiefly that of naval aviators. About 50 per cent of that number have had over ten years of experience in flying.

There are two aviation ratings for Regular Navy pilots; for commissioned officers the rating is that of "Naval Aviator", for enlisted men the rating is that of "Naval Aviation Pilot". The qualifications for these ratings are similar to those of the Army; a one year course in flying, and rigid physical requirements.

Navy pilots perform five major types of flying. They are Scouting, Bombing, Torpedo, Observation, and Spotting, as well as some miscellaneous flying. Navy aviation hazards cannot be measured by types of flying since the pilots are subject to frequent change from one type to another.

Chart V presents the data for Commissioned Navy pilots



CHART IV

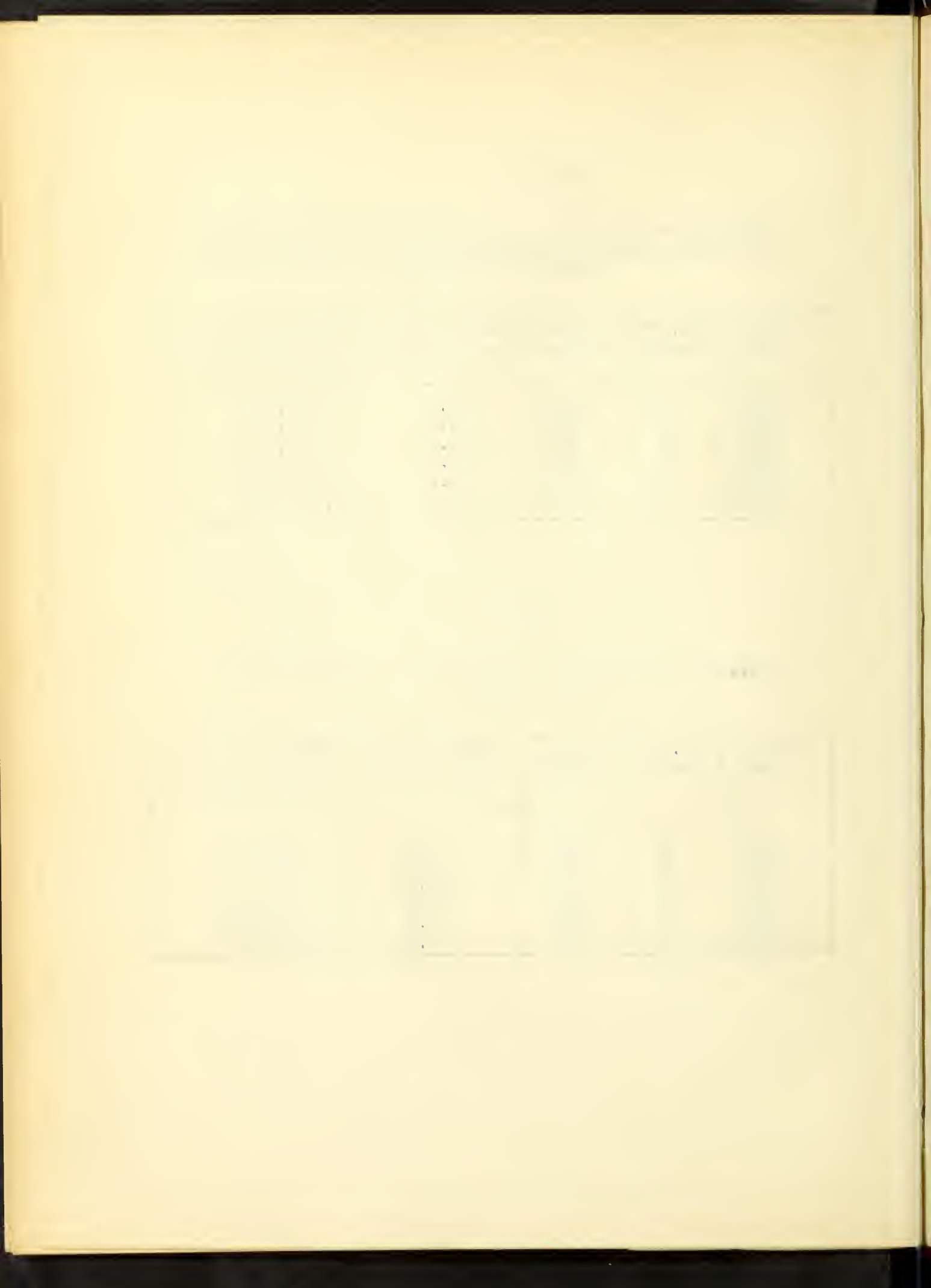
Six Years Mortality Experience for Regular Army
Air Force Officers Including Pilots, Observers and
Non-Rated Officers

Fiscal Year	No. of Deaths	Total Exposed	Death rate per thousand	Number of Airplane Miles per fatality
1925	15	854	17.5	732,593
1926	13	878	14.7	955,015
1927	16	911	17.5	722,750
1928	12	977	12.2	1,360,371
1929	8	1071	7.4	3,136,086
1930	9	1140	7.9	4,117,380

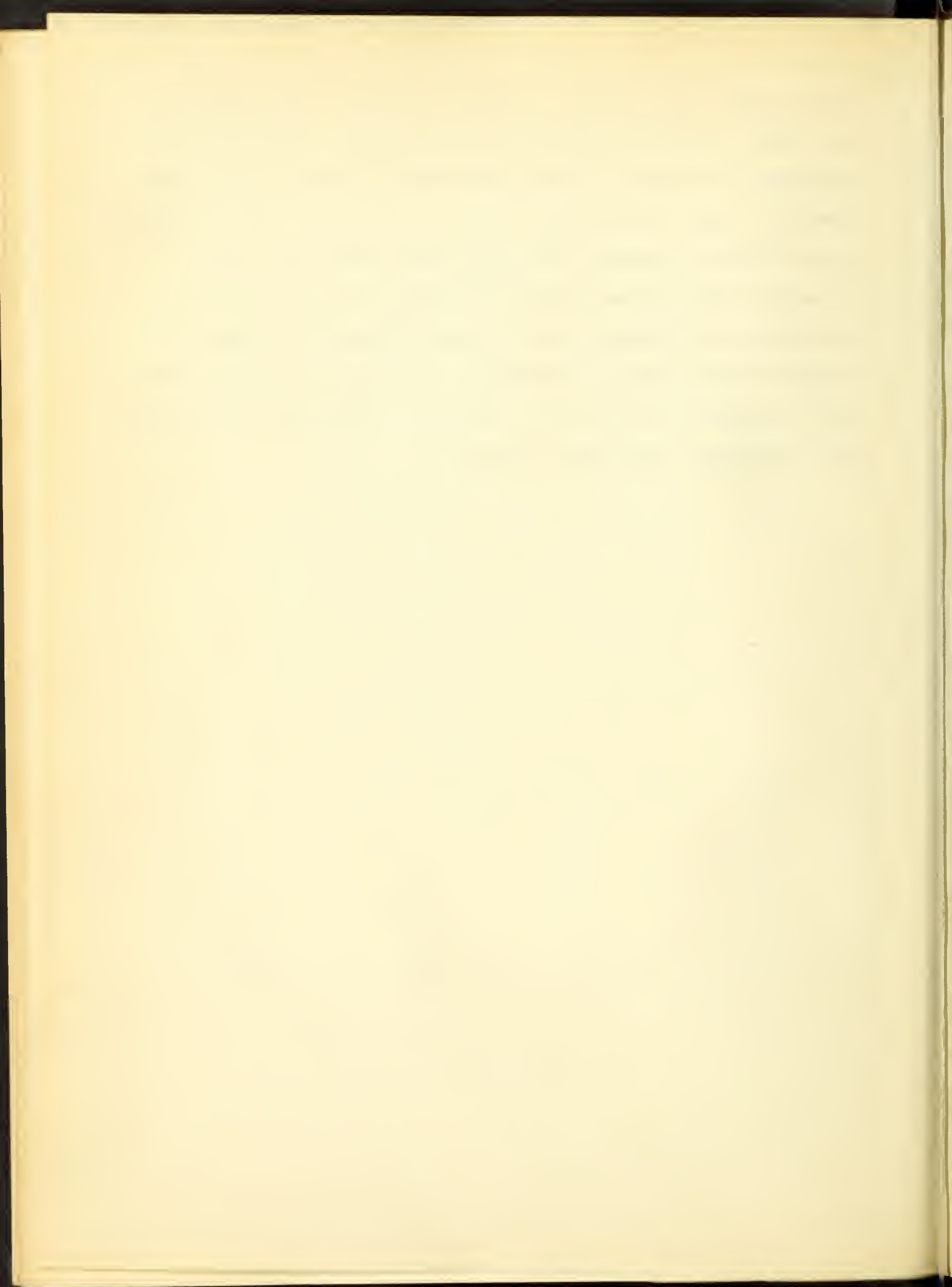
CHART V

Six Years Mortality Experience of Commissioned
Navy Pilots

Fiscal Year	No. of Deaths	Total Exposed	Death rate per thousand	Number of Airplane Miles per fatality
1925	9	382	23.5	331,066
1926	4	426	9.4	822,712
1927	9	472	19.0	549,617
1928	13	466	27.3	551,493
1929	5	520	9.6	2,021,760
1930	5	565	9.2	2,647,880



over a six year period. It shows a decided improvement in the number of miles flown for each fatality. The record of the Navy Air forces is not as favorable as that of the Army, however. Navy officials are aware of this fact and are making every effort to improve the death rate among Navy pilots. A revised maintenance inspection system has recently been completed and installed in all naval flying activities. This insures fewer chances of mechanical troubles which might result in airplane accidents. In general, the accidents of the Navy are being constantly lowered.



Underwriting Practices

With the Hazards of piloting well in mind, let us turn now to the insurance companies and see what they are doing to protect the pilot. A study of 106 of the leading insurance companies of the United States and Canada, reveals the fact that fifty seven companies will write insurance on the lives of pilots, but none will write pilots exclusively. Thirty two companies will insure the lives of student pilots.

The ratings and classification of risks used by the different companies are numerous and assorted. To illustrate the underwriting methods used by insuring companies, rating schedules used by the fifty seven companies are given in Appendix I. The schedules given also include ratings for passengers, which will be referred to in a later section on the passenger hazard. A study of the ratings employed for the aviation risk will convince the reader that there was no uniformity in either the system of rating or in the rates proper. It is also very evident that the flying hazard was not properly determined in many cases before ratings were made. Chart VI shows the number of companies using the various rating schedules.

In schedule A, pilots appear to be rated according to type of flying performed. Most pilots are prohibited. Those accepted are passenger, mail, or express service pilots. Our study of the pilot hazard showed that flying time, or exposure, was a very important factor. According to this schedule flying time is not considered. The rating is based solely upon the type of flying done.

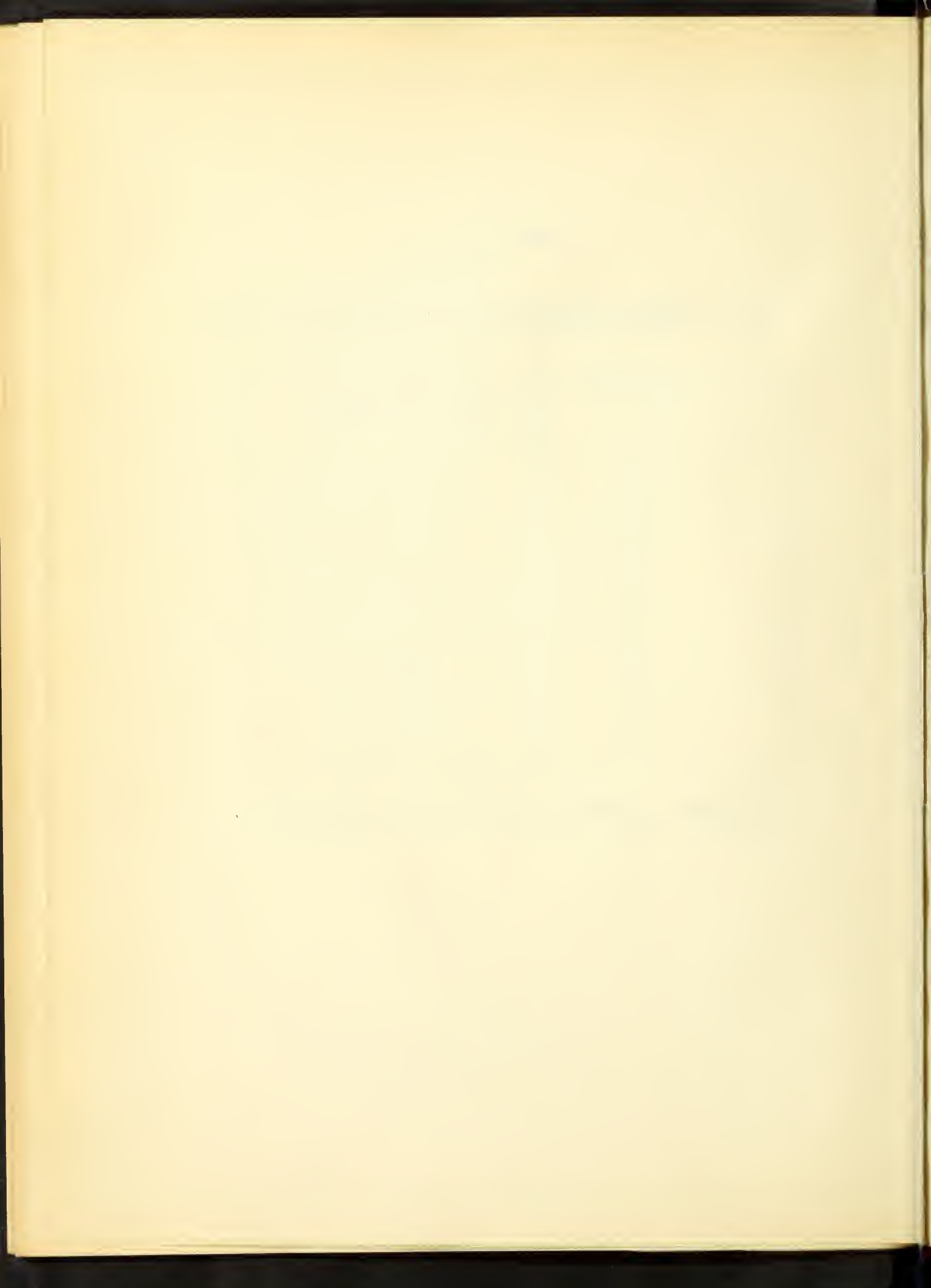


CHART VI

List of Rating Schedules*, and Number of Companies
Using Each, in Underwriting Pilots.

Schedule	Number of Companies Using It
A	1
B	7
C	5
D	5
E	1
F	3
G	3
H	1
J	1
K	1
L	1
M	17
O	4
P	6
R	1

*Complete Schedules may be found in Appendix I.



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Schedule B places about the same premium rating on all pilots who are accepted. This rating is a safe one for the insuring company, provided it covers the maximum risk. No attempt is made here to adjust the rating according to the degree of hazard involved.

Schedule C. again rates according to type of flying. Likewise, in schedule D, although there is some evidence, in schedule D, that amount of flying was taken into consideration. Army and Navy pilots are rated according to rank and amount of experience. Air Mail pilots are rated heavily, in keeping with our own study.

In Schedule J. consideration is given to experience and, in the case of passenger plane pilots, the type of organization operating the air line.

The remaining schedules present little variation in the factors determining rates, from those already considered. Some companies reinsure their pilot risks, some accept the ratings of other companies, and still others treat each case on its individual merits.

The fact must not be overlooked that the companies who have attempted to rate the aviation risk are the pioneers in the field of aviation life insurance. They are taking the forward step and are preparing the way for the others who will eventually fall in line. As has been stated before, statistics are so meagre and cover such a brief period that the hazards of flying cannot be accurately measured. The companies are constantly revising their rating schedules and will eventually arrive at a sound underwriting basis.

It is interesting to know how "Lloyd's" in London underwrote

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it's first aviation risk. The applicant was a pilot who was seeking insurance protection. It was prior to the World War and no one in Lloyd's organization was familiar with underwriting aviation risks. So it was decided to let the pilot act as his own underwriter, under the condition that he be reasonable to both himself and the company. The risk was accepted, the flight was successful, and the pilot was employed by Lloyd's as an aviation underwriter.

It has been found that very few of the companies underwriting the aviation hazard, have in their employ, a person who is experienced in aviation and familiar with the latest developments in aeronautics.

It would seem that the greatest single aid to aviation life insurance companies, at the present time, would be a central bureau, supported by the insurance industry, for the purpose of accumulating, classifying and distributing information and statistics to member companies, regarding the aviation industry and the hazards of flying. Connected with the bureau should be one or more active pilots who are in close contact with the progress of aviation and are in a position to give first hand information to insurance companies. An actuary would be of value in arranging the data in a form suitable for insurance purposes. The benefits derived from such a bureau should be well worth the expense of maintaining it.

Many different questions are asked applicants for life insurance regarding their personal aviation risk. The questions are usually contained in a questionnaire, which is considered a part of the application for insurance, and has

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an important bearing on the acceptance and rating of the risk. As in the case of rating schedules, the questionnaires are of a wide variety. Because of the lack of uniformity, twenty one typical questionnaires are presented in Appendix II of this study. The questionnaires are used for both pilots and passengers, and will, therefore, be referred to later in connection with the section on passengers.

The questionnaires, also, show evidence of lack of a true conception of the aviation hazard, on the part of insurance companies. It will be noticed, in studying the questionnaires, that some companies accept the risks which this study considers most hazardous, and rejects some which are more favorable from an insurance standpoint.

B. Passengers

A study of the aviation hazards to passengers will resemble that of pilots. In some cases the same factors will be considered. The amount of flying time, or exposure, the type of plane traveled in, the pilots rating, and the terrain over which the plane flies, are important considerations to the insuring company in underwriting the life of a passenger.

Classification

Passengers are classified by the kind of flying done, the purpose of the flight, and the amount of air traveling during each year. The least hazardous group of passengers includes those who make very few trips a year, as fare-paying passengers, for pleasure, and for flights of short duration. The fact that

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one is a fare-paying passenger means that he must fly in a licensed plane operated by either a transport pilot or a limited commercial pilot, for only these two classes of pilots are permitted to carry passengers for hire.

Persons traveling over established airways, as fare-paying passengers, and between well equipped airports, comprise the next group. Those of this group who make only occasional trips do not present a serious hazard and might be included in the first group. The risk increases, however, with the number of flights taken during the year. An habitual user of commercial airways is more exposed to accidental death than a less frequent user, so that in rating one of this group consideration must be given to the number of flights made per year.

Hazards

The more hazardous group includes persons flying without choosing, with care, the pilot with whom they fly, or the plane in which they ride. This type of flying usually takes place from a poorly equipped field where landing conditions are dangerous. Employees of aircraft manufacturing companies are usually considered separately, as well as airport attendants and mechanics.

Past experience in air transportation must be relied upon to a great extent, in connection with the passenger hazard, so some time and space will be devoted to a study of the recent mortality and accident statistics. The death rate among passengers could not be determined because the number of persons who could be classed as passengers was unknown.

In Chart VII is classified the number of passenger

CHART VII

Passenger Fatalities for a Three Year Period
Grouped in Each Class of Airplane and Pilot License.

Year	Number of Fatalities in		Number of Fatalities Where Pilot of Aircraft Was	
	Licensed Aeroplanes	Unlicensed Aeroplanes	Licensed	Unlicensed
1927	28	71	29	70
1928	142	81	115	108
1929	152	74	136	90

CHART VIII

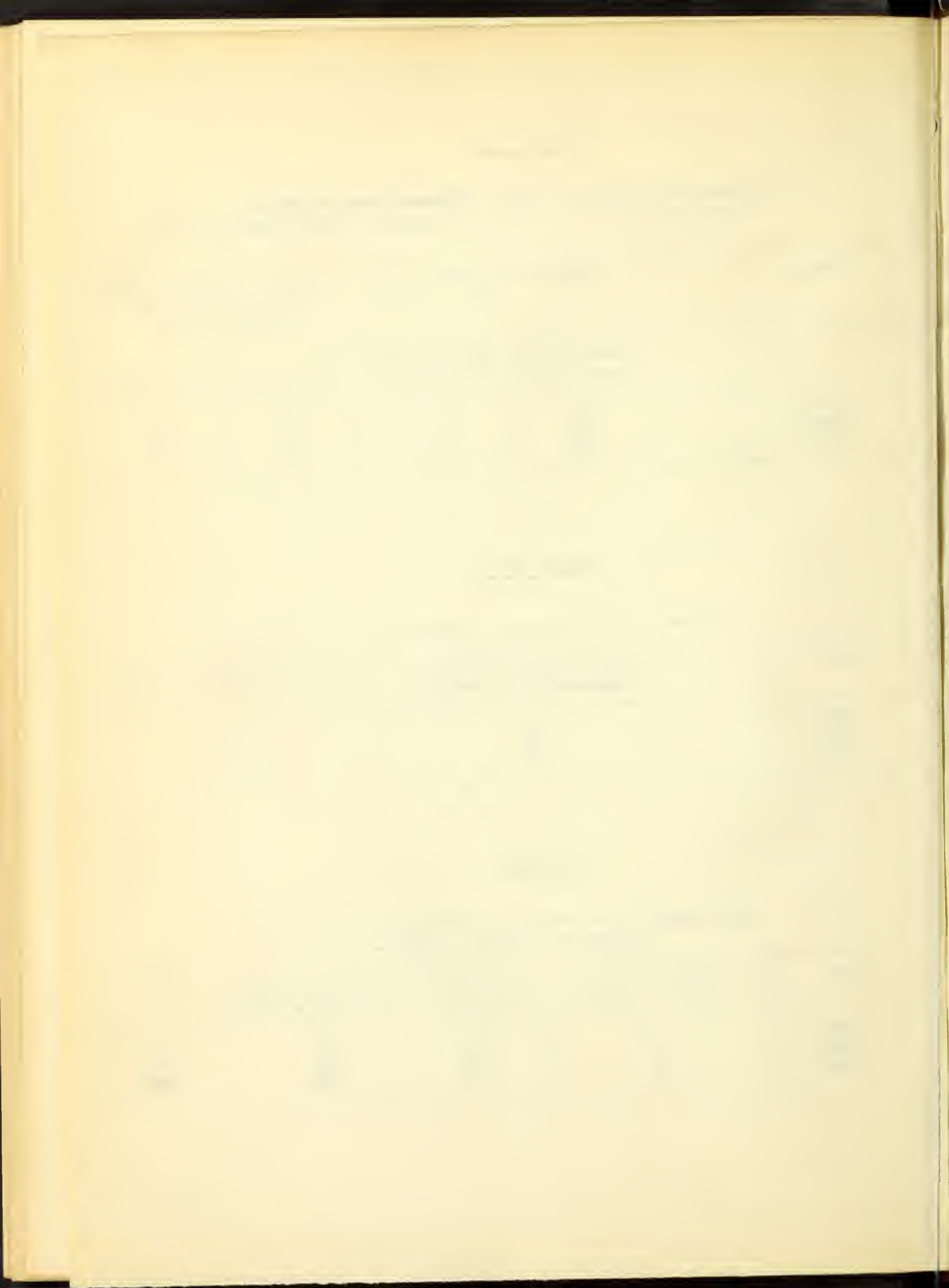
Number of Fatalities Occurring in Airplanes of

Year	Well Organized and Responsible Companies	Private Operators or Very Small Operators
1927	12	87
1928	31	192
1929	64	162

CHART IX

Passenger Fatalities According to Class of
Flying at Time of Death.

Year	Paid passenger Hop or flight	Pleasure flight	Cross-Country or Misc. Flight	Total
1927	54	27	18	99
1928	87	83	53	223
1929	96	72	58	226



fatalities according to licensed or unlicensed pilot or plane. It is noticeable that the number of fatalities increases with the years. This is easily explained by the increase in the number of people who are using the established commercial airways as a means of transportation, and the number who take sight seeing and pleasure trips in airplanes. The chart also indicates a tendency toward a greater increase in fatalities in licensed planes, than in unlicensed planes. This tendency should not be interpreted as meaning that flying is becoming more hazardous in licensed planes and less hazardous in unlicensed planes. The fact is that the proportion of unlicensed planes is constantly being reduced, and that the increase in fatalities in licensed planes is due to the increase in the number of planes in that class, and to the increase in the number of persons flying in licensed planes. To know the number of passenger miles would be of great assistance in measuring the passenger hazard, but such information was not available for the same period of time.

In Chart VIII the type of organization in which fatalities to passengers occurred is indicated. This factor should be weighed by insurance companies in considering the passenger risk. As indicated, the number of fatalities in airplanes operated by well organized and responsible companies is considerably less than that of small or private operators. This data is not conclusive, however, because we do not know the amount or distance of flying nor the number of passengers in either case. It is reasonable to assume, though, that the hazard per hour or mile over lines of well

organized companies is less, since the supervision, inspection, and selection of pilot, receives greater consideration in such organizations.

The class of flying indulged in has a direct bearing upon the hazard involved. Here again underwriters lack desirable data upon the amount of flying being done in each of the types. Chart IX shows the number of fatalities according to the class of flying at time of death. The class entitled paid passenger, hop or flight, is the least hazardous class, per mile or hour. The comparatively large number of casualties is due to the large number of participants in this class. Cross country and miscellaneous flights, while accounting for the least number of casualties, represent a high death rate. The exposure is not great in this class, but accidents are comparatively numerous since it includes such flights as non-stop, endurance, and test.

The data given in Chart X is rather interesting and perhaps surprising. Of the total deaths, the class of habitual flyers comprise the least. The greatest number of deaths occurring in cases where the passenger is making his first flight. This situation has been explained as being due to the fact that those making their first flight do not carefully select the plane in which they are going to ride, nor the pilot with whom they are going to fly. Before taking a flight a person should consider the qualifications of the pilot, by the type of license he holds, and the amount of piloting he has done. Also, the type and make of plane to be used. Of course, the average person knows little about the qualifications of the airplane. His best

CHART X

Degree of Flying being done by Passengers Who
Were Killed

Year	Number of First Flight	Number Who Flew Occasionally	Number of Habitual Flyers	Total
1927	75	14	10	99
1928	174	37	12	223
1929	168	34	18	220

CHART XI.

List of Rating Schedules*, and Number of Companies
Using Each, In Underwriting Passengers.

Schedule	Number of Companies Using It
A	1
B	7
C	5
D	5
E	2
F	3
G	3
H	1
J	1
K	1
L	2
M	22
O	4
P	6
R	1
S	13
T	1
V	3

*Complete Schedules may be found in Appendix I.



precaution is to make his flight from an established airport where a rigid schedule of maintenance and inspection is enforced, and where good planes and well qualified pilots are employed.

The causes of accidents over air transport lines have been analyzed by Mr. Charles S. Jones, President of the Curtiss Flying Service and co-technical advisor with Colonel Lindbergh in the Transcontinental Air Transport, Inc., as follows:

- | | |
|---|-----|
| 1. Pilots' error | 53% |
| 2. Forced landing due to motor failure where there happens to be no landing field | 20% |
| 3. Act of God | 19% |
| 4. Structural failure | 8% |

Over fifty percent of the accidents are due to the personal element of error. Too often the pilot will take a chance in proceeding into a storm area, instead of making a landing. Again he may hesitate to land for fear of being ridiculed by fellow pilots. A long period of successful flying may tend to make the pilot over-confident. This source of accident is receiving serious consideration by transport companies and the insurance industry. Safety campaigns are in force to impress upon the pilot the importance of using every precaution and the utmost care in his piloting. Progress in air transportation will be retarded unless the number of accidents is reduced. Transportation companies are establishing flying schools on a higher scale than existed

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previously, with the exception of Government schools, believing that improper training is the cause of many accidents.

Forced landings due to motor failure, which account for 20% of the accidents, will decrease as time goes on. The addition of landing fields will help to reduce the hazard from this cause. The pilot cannot be blamed, directly, for motor failure. He should, however, make certain that the plane which he flies receives the proper mechanical and inspection service. The greatest improvement must come in the motor equipment. The use of multi-motored planes, where the failure of one motor will not cripple the aircraft, is one step toward greater safety. Engineers are also working to improve the mechanical operation of aircraft motors.

In this connection the autogiro cannot be overlooked. The development and perfection of this new feature of the aeronautics industry will greatly increase the safety factor in aviation. Such developments are of vital importance to both the aviation and insurance industries. A reduction in the cost of insuring passengers will accompany a reduction in the hazards of flying.

The third cause of accidents, the act of God, is a difficult one to counteract. Storm, wind, lightning, and ice, are beyond the control of man, at the present time. All the pilot can do is to avoid flying under adverse conditions as much as possible. Many accidents could be avoided if flying was confined to the times when conditions are favorable. Of course, the pilot is not always aware of what is before him. He relies upon the forecast at the time of taking off. Improvement in this class of accidents is

dependent upon the development of better communication facilities between the ground and the plane, and a complete and accurate weather forecasting service. Pilots could then receive warnings and the latest weather bulletins while in flight. This involves the installation of radio or wireless sets in aircraft, which means expense, added weight, and possibly a wireless or radio operator, but will be worth while, especially in passenger carrying airplanes. Anything which can reduce the number of airplane accidents should receive consideration.

Ice, caused by rain freezing to the aircraft, is not as dangerous as it might seem. Often the pilot can lift the plane and fly above the clouds, free from the storm. If the freezing rain cannot be avoided, the plane may be forced down from the weight of the ice.

Structural failure is responsible for only 8% of the accidents. New methods of design and the use of new materials are constantly improving the structure of aircraft.

Underwriting Practices

The life insurance companies which write insurance on the lives of airplane passengers are confronted with difficulties similar to those which arise in underwriting the lives of pilots. They have not had the experience and lack adequate statistics upon which to base their present underwriting practices. They are pioneers, and as such, deserve credit for doing what they can to protect participants in air transportation, which in turn promotes the development of aeronautics.

Eighty-one of the 106 companies covered by this study, will write contracts on the lives of passengers. Because of the lack of uniformity in the system of rating and in the rates, it seems advisable to include in Appendix I of this paper, the schedules of ratings used by the companies writing passenger risks. The schedules are lettered alphabetically, and the number of companies using each is indicated in Chart XI.

Schedule M is used by the largest number of companies. It is a flexible schedule which can be easily adapted to individual cases. The companies using it follow the example of others and do not commit themselves on any definite stand.

Schedule S is used by 13 conservative companies. Only standard risks are acceptable, no attempt being made at rating the extra hazards of flying.

Schedule O, which is used by 4 companies, is certainly a simple one. All aviation risks are treated equally. There is no attempt here to rate the insured according to the degree of hazard involved. It appears to the writer that companies using this schedule expose themselves to a rather dangerous situation. The more desirable aviation risks will not pay the extra \$25 when they can procure the same protection with some other company for \$10 or \$15 per thousand. And those least desirable, who would usually have to pay more than \$25 will insure with companies using schedule O. In other words, these companies might find that over a period of time they were not getting a good distribution of risk, that their aviation risks consist chiefly of those individuals who are exposed to the greatest hazards, and among whom the mortality

rate is high.

The other schedules are not uniform but are similar. Most of them quote ratings according to the number of flights per year, which is a logical scheme. Rates for the same exposure differ among companies due to the lack of basic information and to the difference in underwriting policy. The passenger schedules, as a whole, appear to be more logical than those for pilots, because more emphasis is placed upon the exposure, or amount of flying being done.

Insurance companies base their decisions on the answers to questions that appear in a questionnaire which each applicant is required to complete, if he has had, or intends to have any connection, whatsoever, with aviation. The questionnaires, which make up Appendix II of this study, apply to both pilots and passengers, and contain the questions which different underwriters consider important in insuring the lives of its applicants. They are not uniform and in some cases display a lack of knowledge of the hazards of flying. Some companies will issue insurance to those exposed to aviation hazards, without the extra rating, provided the company is relieved from all liability in case of death of the insured as a result of participation in aeronautics. Such policies contain a rider or clause similar to the following:

If the death of the insured under this policy or any policy issued in exchange herefor shall result directly or indirectly from being in or on, or operating or handling, whether as a passenger or otherwise, any kind of aircraft, or from falling therefrom or therewith, the Company's liability under this policy shall be limited to the insurance reserve thereon, less any existing indebtedness, any provision of the policy to the contrary notwithstanding.

The foregoing study presents a fairly clear picture of the pilot and passenger risk involved in aviation, and the present practice among companies for providing life insurance protection for those exposed. Two methods are used in the rating of risks. First, is to charge an extra annual premium, and second, to limit the amount of insurance issued. There is evidence in the ratings of lack of knowledge of the hazards involved in aviation, but the companies writing aviation insurance deserve credit for the pioneering they are doing in attempting to provide protection, and in turn promote the development of aeronautics. In many instances the rates are prohibitive, but experience in aviation underwriting and improvements in the aviation industry will enable companies, eventually, to write insurance on a more satisfactory basis.

There has been some discussion as to why air mail pilots should be forced to fly under adverse conditions. The object of such flying is to maintain the air mail schedule, but a delay of a few hours, or even a day, might be less costly to society than the possible death of the pilot and the loss of the mail, which might result from an attempt to fly when conditions are not favorable.

Accidents, such as the one in which Knute Rockne was killed, are a definite drawback to the aviation industry. The passenger line on which the explosion occurred undoubtedly suffered from a reduction in the number of passengers for some time following the catastrophe. Some good will probably result, however, since the Government is investigating the cause of the explosion with an aim to prevent similar accidents in the future.

Part II

Other Aviation Insurance



Part II

Other Aviation Insurance

Like life insurance, the other types of aviation insurance are becoming more and more important to the increasing aeronautics industry. Casualty and fire insurance companies are confronted with a difficult problem in writing aviation insurance. With only 6,684 licensed aircraft in the United States, as of July 1, 1930, (of which number 1000 was estimated to be in the hands of manufacturers and distributors) the spread is very limited, in comparison with other classes of insurance, being confined to a small number of hand made custom built units. Imagine the accumulation of liability particularly in covering the few existing large air liners, costing \$100,000 or more each, the loss of any one of which would represent the entire premium covering 70 aircraft fully insured of the average value produced in 1929. Also visualize the exposure which underwriters will have to handle, when Dornier DO-X aircraft costing over a quarter of a million dollars and carrying 169 passengers, are placed in operation in this country.

There are four major classes of aviation insurance: insurance on aircraft; on personnel and individuals; airports and hangars; and cargo, cargo liability and passenger baggage liability. All risks are not eligible for full insurance coverage. An applicant may qualify for certain forms of protection without being eligible for all forms. The basic economic soundness of the operation and the financial and moral responsibility of the operator are the prime

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determining factors of such risk. The make and type of aircraft, including the make and type of engine installed, together with the experience of the pilot, the purpose for which the aircraft is to be used, the airport and hangar facilities utilized and the terrain over which the aircraft is to be operated, are the principal technical factors considered in the underwriting.

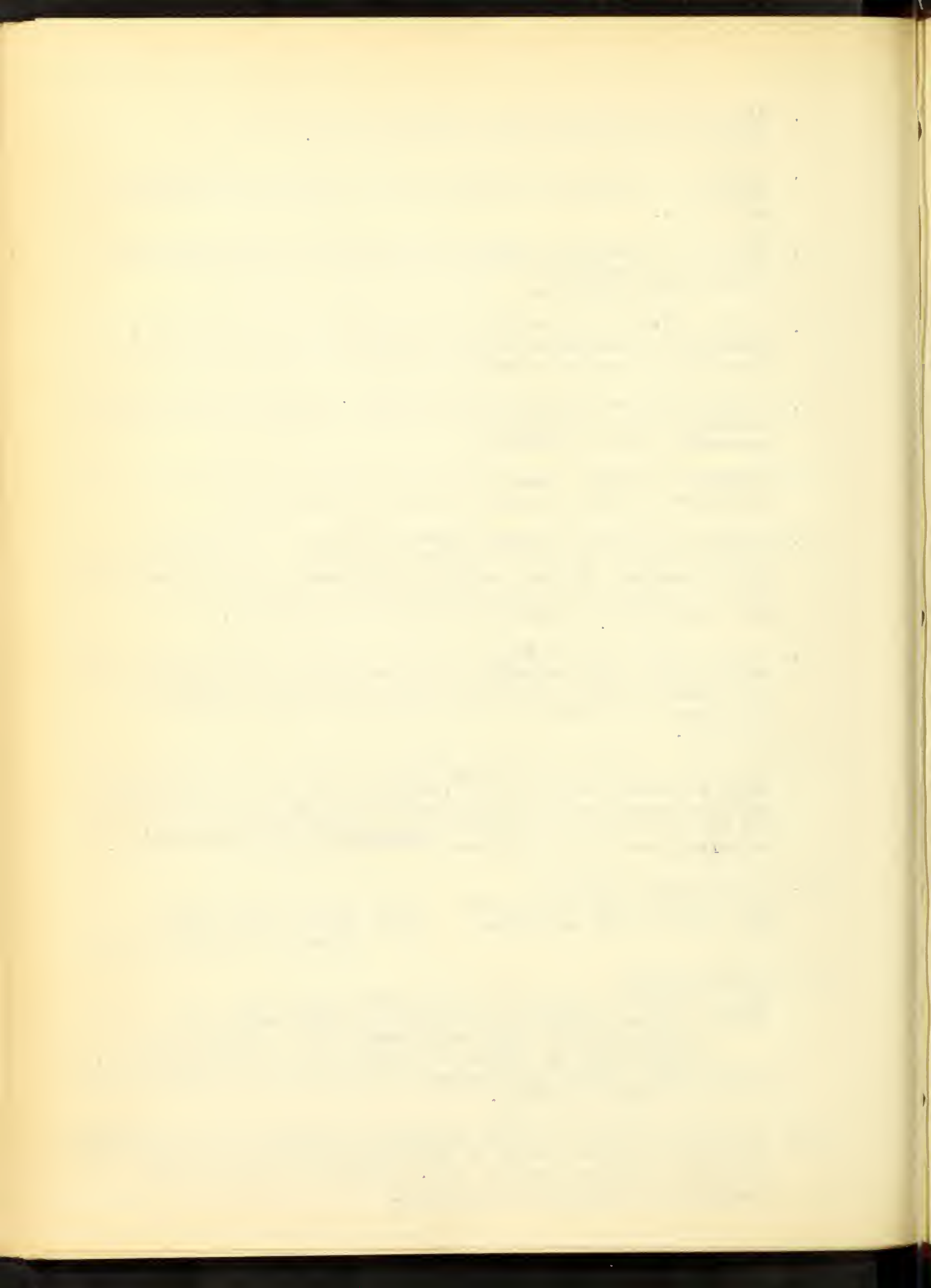
Because of the large variety of planes and motors, and the difference in the qualifications of pilots, each risk has to receive individual consideration. There are many aircraft manufacturers, some building more than one model. Any one of the various models may be powered with any one of several different makes or types of motors. Underwriters must consider the characteristics and performance of each model when determining insurability. Some planes have high landing speeds, and when this is the case, more hazards are encountered over sections of the country which do not provide flat open spaces for forced landing. Some types of construction are more easily damaged in an accident than others.

The ability and experience of the pilot are of great importance in underwriting. The experience of the pilot and the make of aircraft must be considered in connection with the adaptability of the craft to the proposed operation that is to be insured, since some planes are excellent for one kind of work and poorly suited for other kinds of flying. A list of the common types of flying follows:

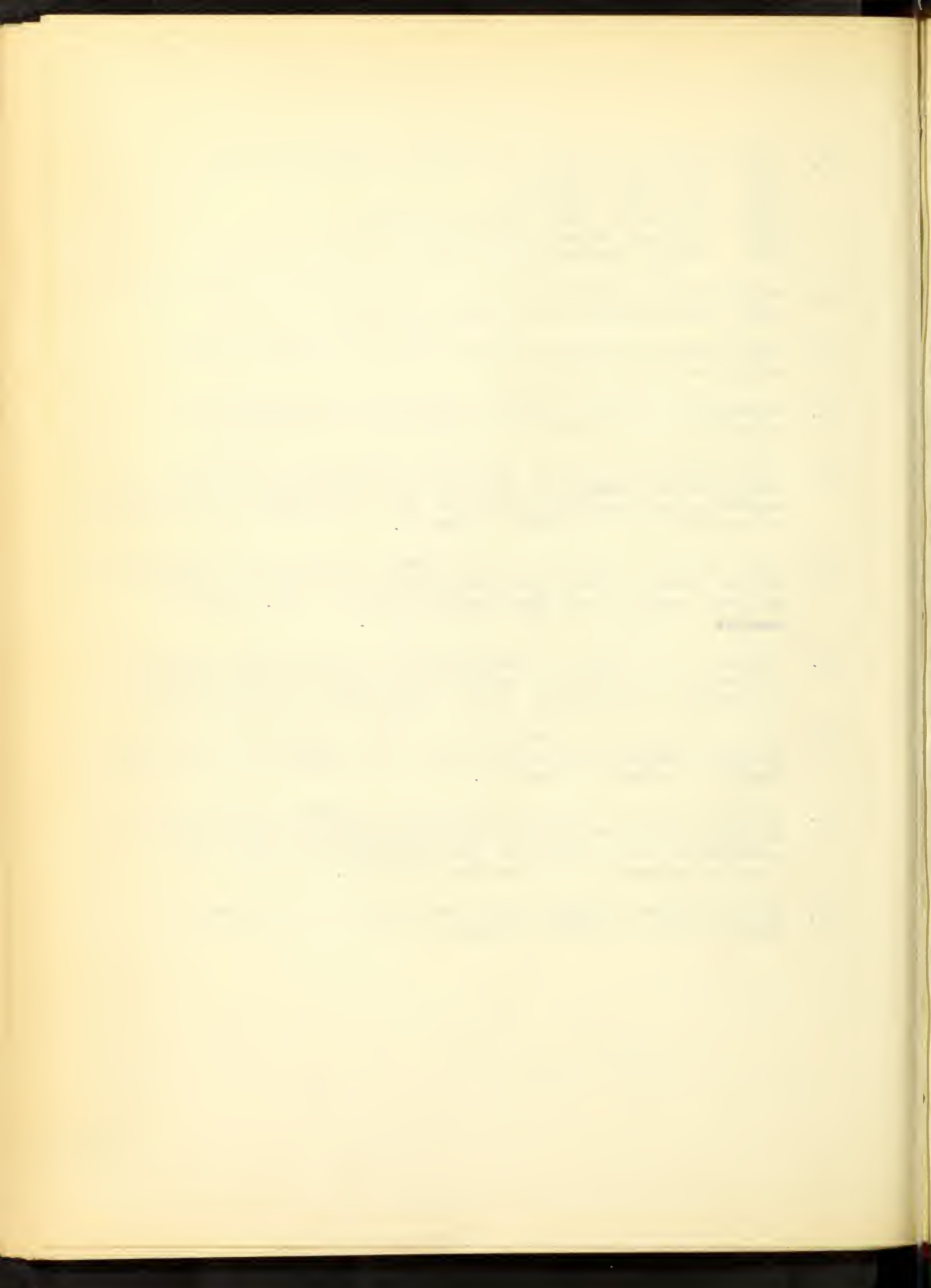
1. INSTRUCTION: Operation of aircraft for purpose of giving instruction, either dual or solo.
2. CONTRACT AIR MAIL: Carriage of United States and foreign mails on a scheduled service over a regularly established air route.
3. SCHEDULED PASSENGER SERVICE: Transportation of passengers over a regularly established air route operating on advertised schedule.
4. CROSS COUNTRY TAXI FLYING: Transportation of passengers for hire not on schedule or over an established route, but at convenience and to varying destinations desired by charterer.
5. SIGHTSEEING ---AIRPORT FLIGHTS (HOPS): Short passenger sight-seeing flights in vicinity of airport usually not exceeding one-half hour in duration.
6. PRIVATE PLEASURE: Non-commercial operation of aircraft, for pleasure of owner, with or without passengers.
7. PRIVATE BUSINESS FLYING: Transportation of executives, employees, and guests (but not for hire or reward) of assured in the conduct of the assured's business, which, except for use of aircraft as convenient means of transportation, is not otherwise connected with aircraft industry.
8. SALES DEMONSTRATION FLIGHTS: Short flights in aircraft owned by aircraft sales agents, distributors or manufacturers and operated by pilots in their employ carrying prospective purchases to demonstrate the performance of aircraft or engines.
9. DELIVERY FLIGHTS BY MANUFACTURERS: Almost all aircraft are sold by manufacturers F.O.B. factory, but as a convenience to purchasers, manufacturers will make delivery of aircraft by air to desired destination at the purchaser's risk, the manufacturer furnishing one of his own pilots for flight.
10. ADVERTISING FLIGHTS:

(I) Sky-writing with smoke	(II) Dropping circulars
(III) Using loud speakers	(IV) Night flying with electrical display signs
11. TEST FLIGHTS:

(I) Initial flights of experimental aircraft
(II) Initial flights of a standard built model by manufacturers when constructed in accordance with Department of Commerce Approved Type Certificate (A.T.C.)
(III) First flight of licensed aircraft after reconstruction or major overhaul.
12. ACROBATIC FLYING: Meaning intentional manoeuvres unnecessary in air navigation, such as looping, spinning, rolling, hedge hopping, contour chasing, etc. (either for exhibition purposes or pleasure of operator)



13. STUNT FLYING: Flying of an unusual nature such as:
 - (I) Endurance Flights
 - (II) Refueling Flights
 - (III) Non-stop long distance flights
 - (IV) Racing, speed tests
 - (V) Other competitive flights.
14. PHOTOGRAPHIC-SURVEY FLYING: Operation of aircraft equipped with aerial cameras for making surveys.
15. PHOTOGRAPHIC PICTURE MAKING: Flying incidental to the making of motion pictures.
16. NEWSPAPER EXPRESS FLIGHTS: Delivery of newspapers on schedule over established route (usually at night).
17. NEWS REPORTING FLYING: Operation of aircraft owned or chartered by newspaper or news syndicate for transporting reporters and photographers to and from scenes or situations of national or community interest.
18. CROP DUSTING: Operation of aircraft equipped with apparatus to sow seed, or with dusting apparatus to spray crops to prevent damage from destructive insects, etc., such as dusting of cotton to kill Boll Weevil.
19. PROSPECTING FLIGHTS: Transportation of engineers, miners, traders, and equipment to and from distant and usually otherwise inaccessible mines, locations or trading posts.
20. MERCHANDISE FLIGHTS AS PUBLIC CARRIER: Transportation of freight and/or express for hire over regularly established route in scheduled service.
21. PRIVATE CARGO OR FREIGHT CARRYING FLIGHTS: Transportation of freight and manufactured goods, the property of the assured in the conduct of the assured's business, excluding shipments transported for hire.
22. MISCELLANEOUS FLYING: All other types of flying not specifically described above.



At the present time aircraft insurance rates are so high that they constitute a heavy drag on the progress of the aviation industry. But they will go higher unless crash and fire losses can be materially reduced. Some companies have ceased writing aviation insurance because their losses were too great. Others are attempting to raise rates still higher in order to meet existing conditions. The most satisfactory and constructive solution is to reduce the losses which are now being incurred by reducing the number of accidents.

Over 50% of the accidents are due to "pilot error", so it is natural that the pilot should be the target for safety campaigners. The insurance companies believe that many more than 50% of the accidents are the fault of the pilots, but the Aeronautics Branch of the Department of Commerce blames them for only 55%. One pilot owner of an aviation business says that nine out of ten young men who are desirous of entering the field of aeronautics believe that to be an aviator is to be a dashing hero. Their aim is not the advancement of aviation through their own efforts, but the advancement of their own glory. This is a sad situation and a difficult one to combat.

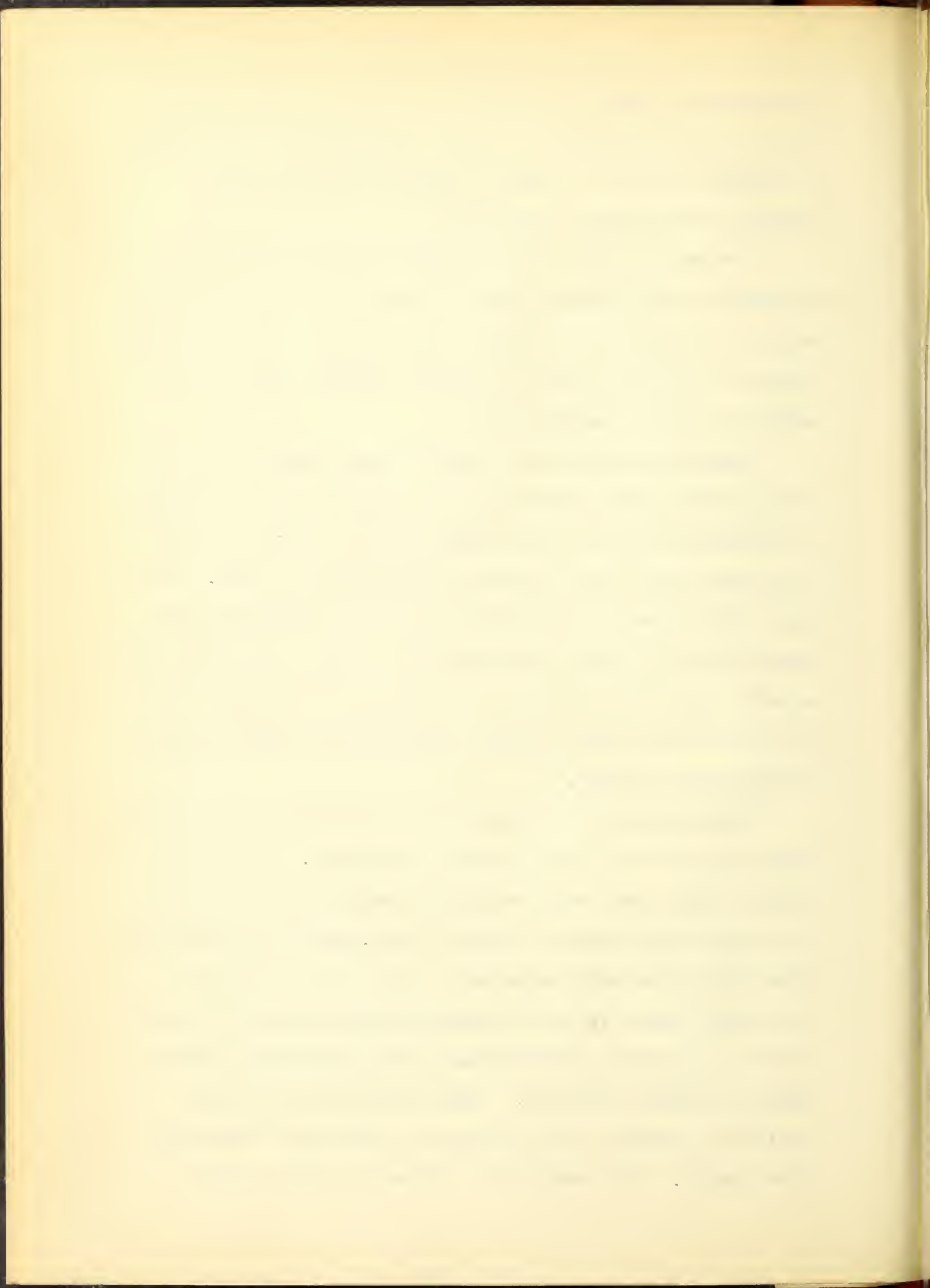
One of the most difficult things for a pilot to do is to turn back when unfavorable flying conditions arise. He is subject to the jeers of fellow pilots and to comments from his superiors. It takes more nerve to turn back than to continue and take a chance. But, for the safety of

passengers he should turn back, if there is any doubt in his mind about making the flight successfully. He should be praised, instead of jeered, for using his better judgment and delaying the trip.

A recent ruling of the Department of Commerce of a minimum of five hundred feet altitude for transport planes may be of some help. It will give the pilot the legitimate excuse of quitting when the weather becomes poor and the ceiling is less than 500 feet.

Overconfidence is the cause of many accidents. The young pilots with only fifty or a hundred hours of flying are dangerous ones. When their training period is over they think they have learned all there is to learn. But their experience is too limited and their judgement too immature to be placed in responsible flying positions, where several lives are involved. Such positions should be held by pilots who are more mature and who have passed through the dare-devil stage.

Carelessness is the cause of many losses in aviation, the same as it is in many other industries. Fires are started many times when welding is being done on a plane. The fumes from highest aircraft fuel ignite very readily. Often the plane being repaired is not in a position in the hangar where it can be easily pushed outside in case of fire, to prevent other planes, and the hangar, from being destroyed likewise. Rags, saturated with oil, collect in corners and in barrels, and form a dangerous fire hazard. The remains of crashes are often piled



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between hangars where they will act as a conveyor of flames, in case fire occurs in either of the adjoining buildings.

These are some of the conditions which have to be considered by the underwriters and which make the insurance rates exceptionally high. Let us consider now the types of protection insurance companies are offering to the aviation industry.

A. Insurance on Aircraft

Aircraft insurance is of two general types, hull insurance, covering damage to the craft, and liability insurance, covering aircraft owners' legal liability for death or injury to individuals, and damage to property of others. The hull insurance is written by fire insurance companies, and the liability insurance by casualty companies.

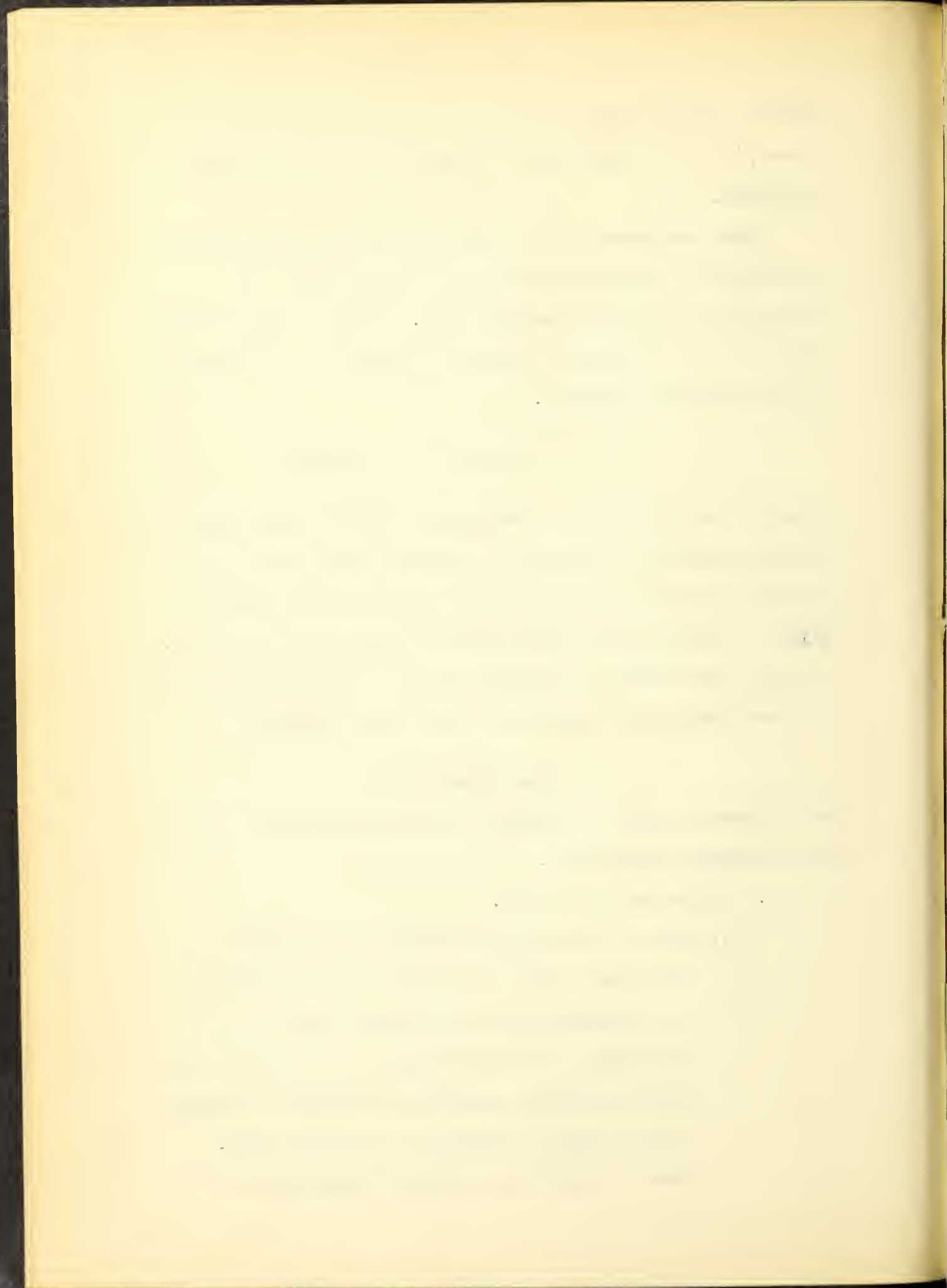
Hull Insurance

Hull insurance may be procured covering any one or all of the following conditions.

A. While not in flight.

1. Fire or explosion arising, or lightning striking, while the craft is not in flight, but excluding loss or damage from fire or explosion arising during, or as a result of, the starting, attempting to start, or running of any engine installed in the aircraft.

(For an additional premium insurance can be



obtained covering fire or explosion arising during, or as a result of, the starting, attempting to start or running of any motor installed in the aircraft).

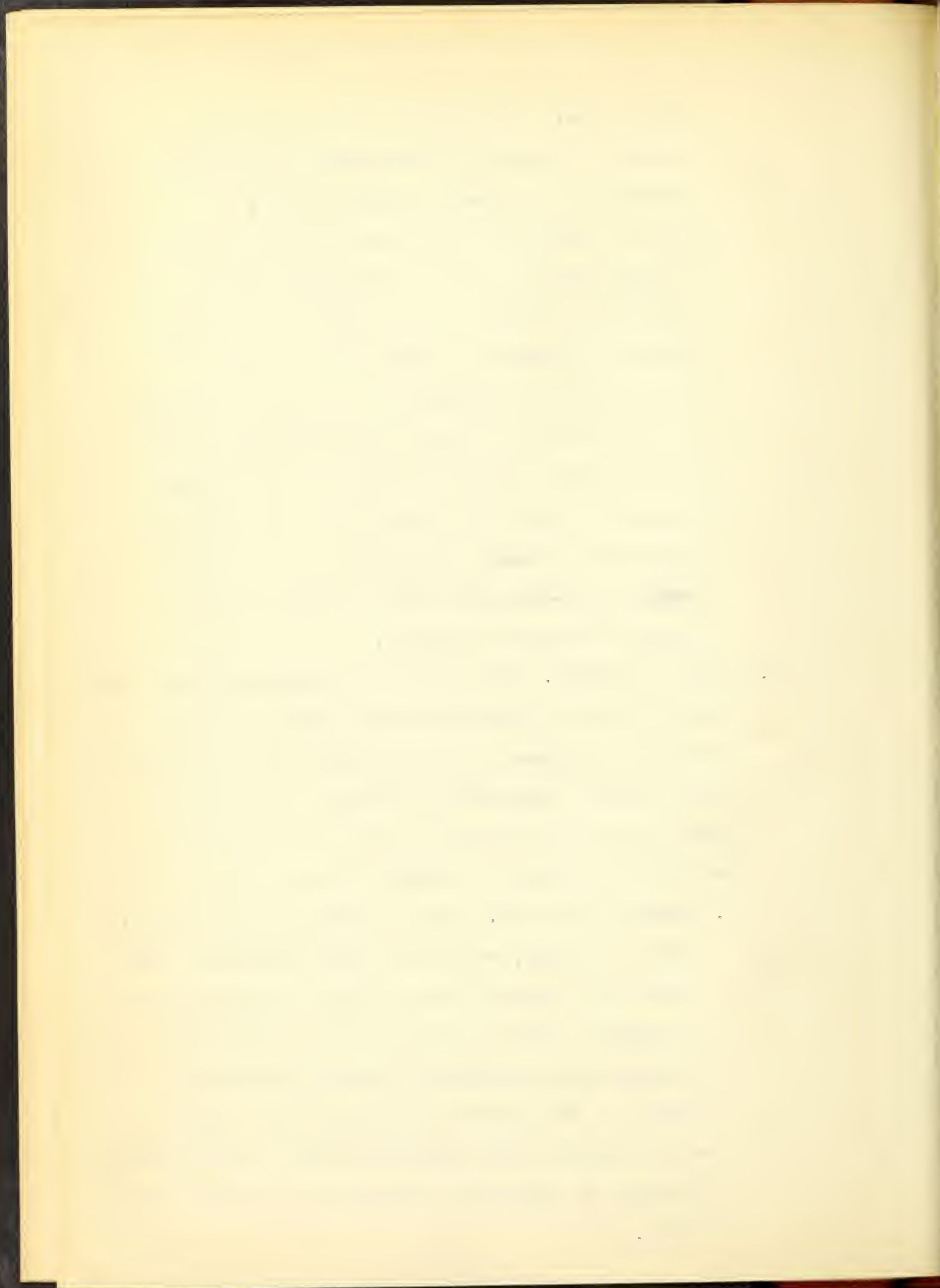
2. Loss or damage to the aircraft caused by stranding, sinking, burning, collision or derailment of any public conveyance in or upon which the aircraft, when properly dismantled and prepared for shipment, is being transported (excepting all shipments by water unless incidental to rail shipments).
3. Loss or damage to the aircraft caused by the direct action of tornado, cyclone or windstorm, but excluding loss or damage caused by hail, rain, sleet, snow, earthquake, flood or water.
4. Theft, robbery and pilferage, excepting by any person or persons in the assured's household, or in the assured's service or employment, whether or not the theft, robbery or pilferage occurs during the hours of such service or employment, and excepting loss suffered by the assured from voluntary parting with the title or possession, whether or not induced to do so by any fraudulent scheme, trick, device or false pretense or otherwise.
5. Loss or damage to flying boats, seaplanes and amphibian aircraft while anchored or moored to a dock, wharf, pier, or buoy, caused by hail, stranding, sinking, striking of such dock, wharfs

pier or buoy, striking by other aircraft, vessel or floating or submerged object, excepting loss or damage caused by ice.

6. Loss or damage to land aircraft while not in flight caused by hail, striking by other aircraft, vehicle or other object (excluding aircraft, vehicle or other object owned or operated by the insured or any of his employees) or the striking of any stationary object whether or not such stationary object is owned by the assured or any of his employees, but excluding any loss or damage occasioned by or arising during taxi-ing into, within or out from a hangar or place of housing.

B. While in flight. The aircraft is considered in flight from the time it starts taxi-ing immediately prior to and for the purpose of taking off, during the take-off, actual flight, descending, landing, and taxi-ing immediately after landing, until it reaches the terminal or parking or mooring place.

1. Perils of the air. Loss or damage to the aircraft while in flight, caused by fire, explosion, lightning, hail, sleet, rain or snow, or collision with the ground, water or other object. Mechanical breakages and structural failures, or loss or damage to the aircraft caused by fire, explosion or collision, even though resulting from mechanical breakage or structural failures, is covered hereunder.



2. Fire or explosion arising, or lightning striking, while the aircraft is in flight, but excluding loss or damage caused by fire or explosion following collision with ground or other object. For an additional premium loss or damage caused by fire or explosion, following collision with the ground or other object, may be covered.

The rate for fire coverage is largely dependent upon the contents rate of the hangar where the aircraft is stored. The contents rate of the hangar depends upon the type of construction and the proximity of fire protection. To the contents rate is added an extra rate in proportion to the degree of hazard involved, with a minimum premium per \$100 of value. For example: (rates quoted are approximate rates for the average aircraft).

Plane not in flight

Rate - $\frac{1}{2}$ of 1 % above contents rate, subject to a minimum rate of \$3.00 per \$100.00 of value.

(a) - Contents rate \$1.25 - aircraft rate \$3.00

(b) - Contents rate \$3.35 - aircraft rate \$3.85

For fire on the ground, as above, but with engines running or being started.

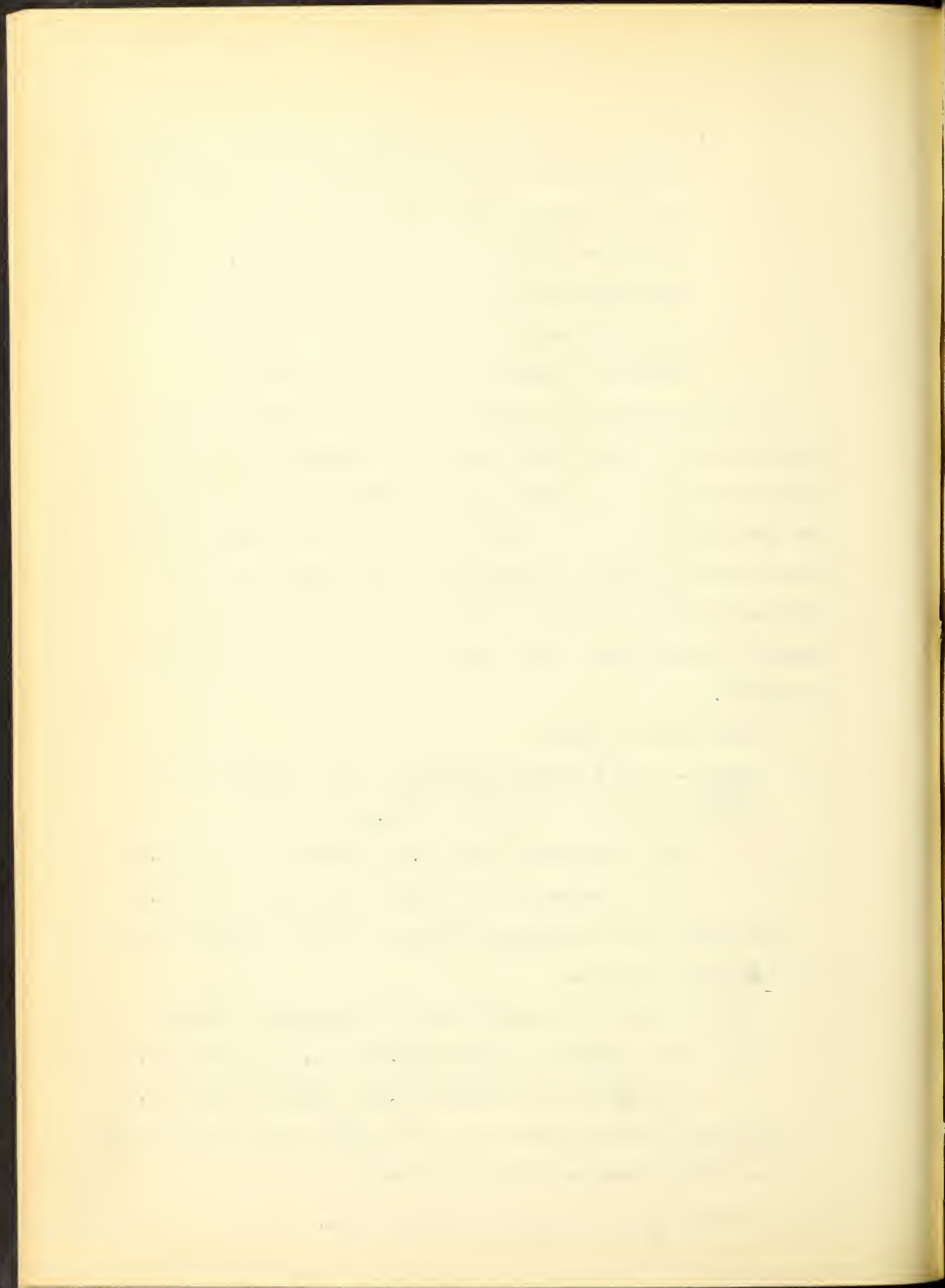
Rate - $\frac{1}{4}$ of 1 % added to rate determined as above:

(a) Aircraft as above \$3.00 + \$.50 - total \$3.75

(b) Aircraft as above \$4.10 + \$.50 - total \$4.60

For fire on the ground and in the air, but excluding fire resulting from and following crash.

Rate - $\frac{1}{2}$ of 1 % added to above rate.



(a) Aircraft as above \$3.25 + \$.75 = \$4.50

(b) Aircraft as above \$4.60 + \$.75 = \$5.35

All the above forms include transportation and explosion.

The rate for windstorm and tornado coverage is dependent on the territory wherein the aircraft is to be operated, because the frequency and violence of windstorms, tornadoes and cyclones vary in different parts of the country. The rates are determined from the location of the home airport. The normal rate for this protection ranges from $\frac{1}{2}$ of 1 % to $1\frac{1}{2}$ % of the value of the craft insured. The relative danger from windstorm and tornado in the States is indicated below. The figure following the name of the state represents the degree of hazard. Number one indicates the least danger from storm, and number five the greatest. This protection covers only hangared aircraft.

Alabama	4	Kansas	5
Arizona	1	Kentucky	3
Arkansas	4	Louisiana	4
Colorado	2	Maine	1
California	1	Maryland	2
Connecticut	2	Massachusetts	2
Delaware	2	Michigan	3
Florida	5	Minnesota	4
Georgia	4	Mississippi	4
Idaho	1	Missouri	5
Illinois	3	Montana	1
Indiana	3	Nebraska	5
Iowa	5	Nevada	1



New Hampshire	2	South Carolina	2
New Jersey	2	South Dakota	4
New Mexico	2	Texas	5
New York	2	Tennessee	3
North Carolina	2	Utah	1
North Dakota	3	Vermont	2
Oklahoma	5	Virginia	2
Ohio	3	Washington	1
Oregon	1	West Virginia	3
Pennsylvania	3	Wisconsin	4
Rhode Island	2	Wyoming	2

Insurance against theft, robbery, and pilferage can be obtained only upon hangared aircraft. The rate depends upon the housing facilities and the proximity of the hangar to patrol service. The average rate for theft coverage is $\frac{1}{4}$ %.

Land damage coverage, which is written only in connection with windstorm, is similar to automobile collision, and covers the plane only while it is on the ground. Damage sustained while the aircraft is taking off or landing is not covered, but taxi-ing incidental to the moving of an aircraft is covered. The rate for this coverage depends upon the type and condition of the home airport and the amount of flying done by the insured plane as well as others. The normal rate is about $\frac{3}{4}$ of 1 %.

Mooring coverage is written only in connection with windstorm and applies to seaplanes and amphibian aircraft while on the water. The normal rate is 2 %.

Protection against perils of the air is the most expensive hull coverage. The normal rate is about 12 %, but so much



depends upon the experience and ability of the pilot that each case must receive individual consideration and therefore the rate is not uniform. On aircraft which are insured for less than the full retail list price the rate is higher, whether the reduced amount of insurance required is necessitated by age or by concession in the purchase price.

All aircraft hull policies contain a depreciation clause covering wear and tear, and obsolescence, which is an important factor. The basis and rate of depreciation varies according to the type and construction of the aircraft, the purposes for which the aircraft is used and the hangar and shop facilities available. Depreciation on the engine is figured separately and is based on the same conditions as those affecting the aircraft.

The normal rate of depreciation is $1/36$ th per month on aircraft, excluding the engine. On modern aircraft engines the rate of depreciation is normally figured as $1/1500$ th per hour of operation but not less than $1/48$ th per month, regardless of the number of hours the aircraft is operated.

Hull policies contain a clause stating that the insuring company shall not be liable for a greater proportion of the amount of insurance than the declared value of the aircraft, suffering loss or damage, bears to the actual cash value of the aircraft immediately prior to the loss, or to the depreciated value, whichever is less, nor if there is other insurance upon the aircraft, for a greater proportion of such amount than the declared value bears to the total amount of insurance covering the aircraft at the time of loss.

Liability Insurance

Aircraft liability insurance protects the assured against three major contingencies; legal liability for bodily injuries to or death of the public, legal liability for bodily injuries to or death of passengers, and legal liability for damage to property of others.

The first, public liability, resulting from injury or death of the public, covers injury to persons not associated in any way with the aircraft, for example, persons on the ground who are hit by a descending plane. The insuring company specifies in its policy the limit of liability for one person so injured, and the total limit for any one accident where more than one person is injured or killed. The insurance is written for the following limits with corresponding average premiums.

<u>Limit</u>	<u>Average Premium</u>
\$5 / 10,000	\$100.00
10 / 20,000	115.00
20 / 40,000	125.00
25 / 50,000	132.00
40 / 80,000	140.00
50 /100,000	165.00

Passenger liability protects the assured against loss from liability imposed by law for damages on account of bodily injuries, including death resulting therefrom, accidentally suffered by any persons while in, on, boarding or alighting from the aircraft described in the policy. The limits covered by the policy are stated in the contract.



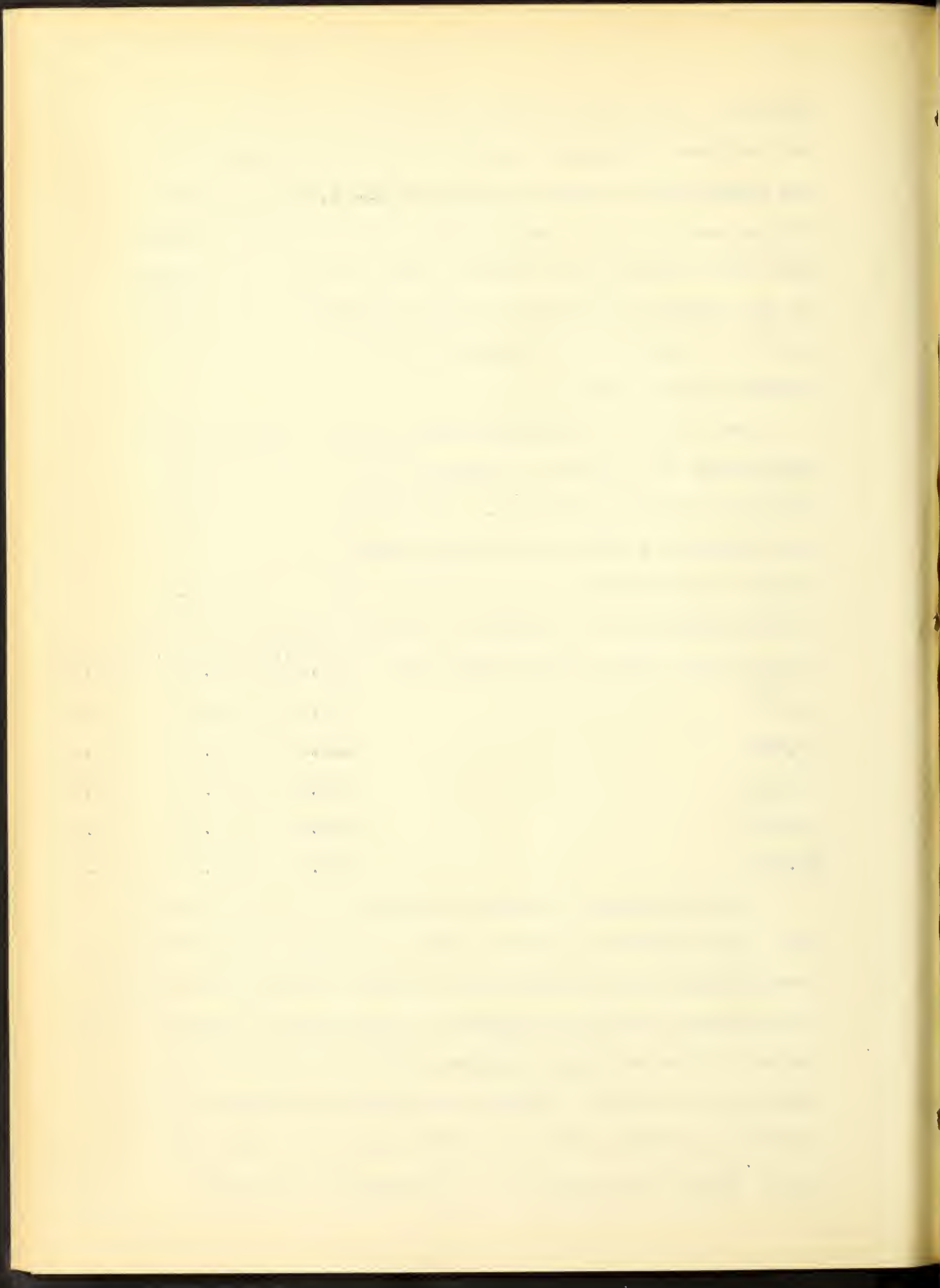
Passenger liability is divided into three classes. Class (a) includes passengers carried for hire or reward; class (b), passengers carried as guests of the assured but for the purpose of sales demonstration or advertising flights when such flying is an indirect part of a selling campaign of the assured; and class (c), where passengers are carried wholly as guests with no expectancy on the part of the assured of any gain.

The limits of passenger liability are determined by multiplying the number of passenger seats by the lower limit of insurance provided. For example, a five place plane carries a pilot and four passengers, and with a \$10,000 lower limit, the upper limit would be \$40,000.

Average premiums for passenger liability insurance follow:

	Class(a)	Class (b)	Class (c)
\$5,000 lower limit per passenger seat	\$80.00	\$70.00	\$50.00
10,000	100.00	80.00	65.00
15,000	110.00	90.00	75.00
20,000	120.00	100.00	85.00
25,000	125.00	110.00	95.00
50,000	135.00	120.00	105.00

Property damage insurance protects the assured against loss from liability imposed by law for damages (including loss necessarily resulting from loss of use) to property of every description (excluding property of the assured, property in the custody of the assured, property rented or leased by the assured and property carried in or upon any aircraft of the assured) resulting from an accident occurring within the policy period and caused by or through the ownership,

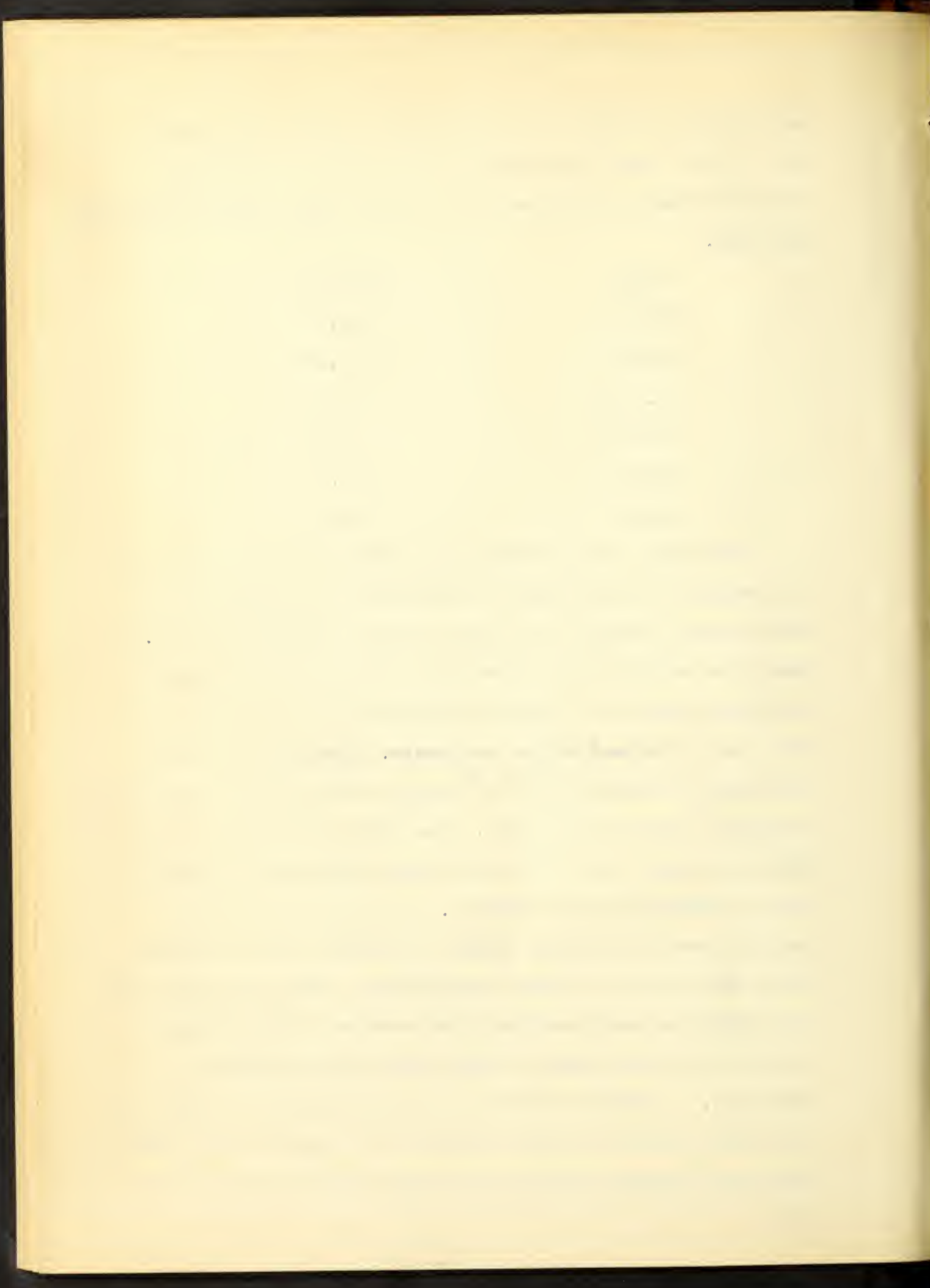


maintenance, or use of any aircraft covered by the policy and for the limits specified in the insurance contract.

Property damage is covered for various limits at the following premiums.

Limit	Premium
\$5,000	\$95.00
10,000	110.00
15,000.	118.00
20,000.	125.00
25,000	138.00
50,000	150.00

The limits and premiums given above are not uniform and are subject to fluctuation as experience in underwriting is acquired and conditions in the aviation industry improve. The insurance policies are filled with restrictions limiting the insuring company to liability under certain conditions which are clearly defined in the contracts. The planes covered are clearly described and the pilots specified who are approved to operate the insured craft. The plane must also be used for lawful purposes only and be confined within the geographical limits outlined in the contract. Any violation of the restrictions, of course, render the policy null and void. Where one policy is issued covering more than one plane, the description of each craft and the details of the coverage on each craft are given in full under the Schedule of Coverages. A complete list of the restrictions, as well as the entire contract, may be found in the specimen hull and specimen liability policies which are inserted after this page.



This Policy is obtainable in any one of the following Companies, Members of the UNITED STATES AIRCRAFT INSURANCE GROUP through the Aviation Managers the

UNITED STATES AVIATION UNDERWRITERS, INC.

80 JOHN STREET

NEW YORK CITY

Aetna Insurance Company
Automobile Insurance Company
Globe & Rutgers Fire Insurance Company
Hartford Fire Insurance Company
National Union Fire Insurance Company

North River Insurance Company
Pacific Fire Insurance Company
Phoenix Insurance Company
St. Paul Fire and Marine Insurance Company
United States Fire Insurance Company

In Consideration of the stipulations and warranties set forth herein, and of the premium named in the attached Schedule of Coverages, which together with the attached Schedule of Declarations, is made a part of this policy, the Fire Insurance Company (hereinafter called the Company), does make insurance as follows:

This policy covers the aircraft described in the Schedule of Coverages against such of the perils defined below as are specifically noted in the Schedule of Coverages at the time this insurance becomes effective, or as may subsequently be agreed upon by endorsement attached hereto, and not otherwise. The period during which this insurance shall be effective is as set forth in the Schedule of Declarations.

DEFINITION OF "IN FLIGHT" AND "NOT IN FLIGHT"

"IN FLIGHT"

The aircraft shall be deemed in flight from the time it starts taxiing immediately prior to and for the purpose of taking off, during take-off, actual flight, descending, landing, and taxiing immediately after landing, until it reaches the terminal or parking or mooring place.

"NOT IN FLIGHT"

The aircraft shall be deemed not in flight when in the hangar or elsewhere on the ground or water, except when taxiing in flight as hereinbefore defined.

DEFINITION OF PERILS

WHILE IN FLIGHT

PERILS OF THE AIR

Loss or damage to the aircraft while in flight, caused by fire, explosion, lightning, hail, sleet, rain or snow, or collision with the ground, water or other object. Mechanical breakages and structural failures, or loss or damage caused thereby, are not covered, but loss or damage to the aircraft caused by fire, explosion or collision, even though resulting from mechanical breakage and/or structural failures, is covered hereunder.

FIRE, EXPLOSION AND LIGHTNING

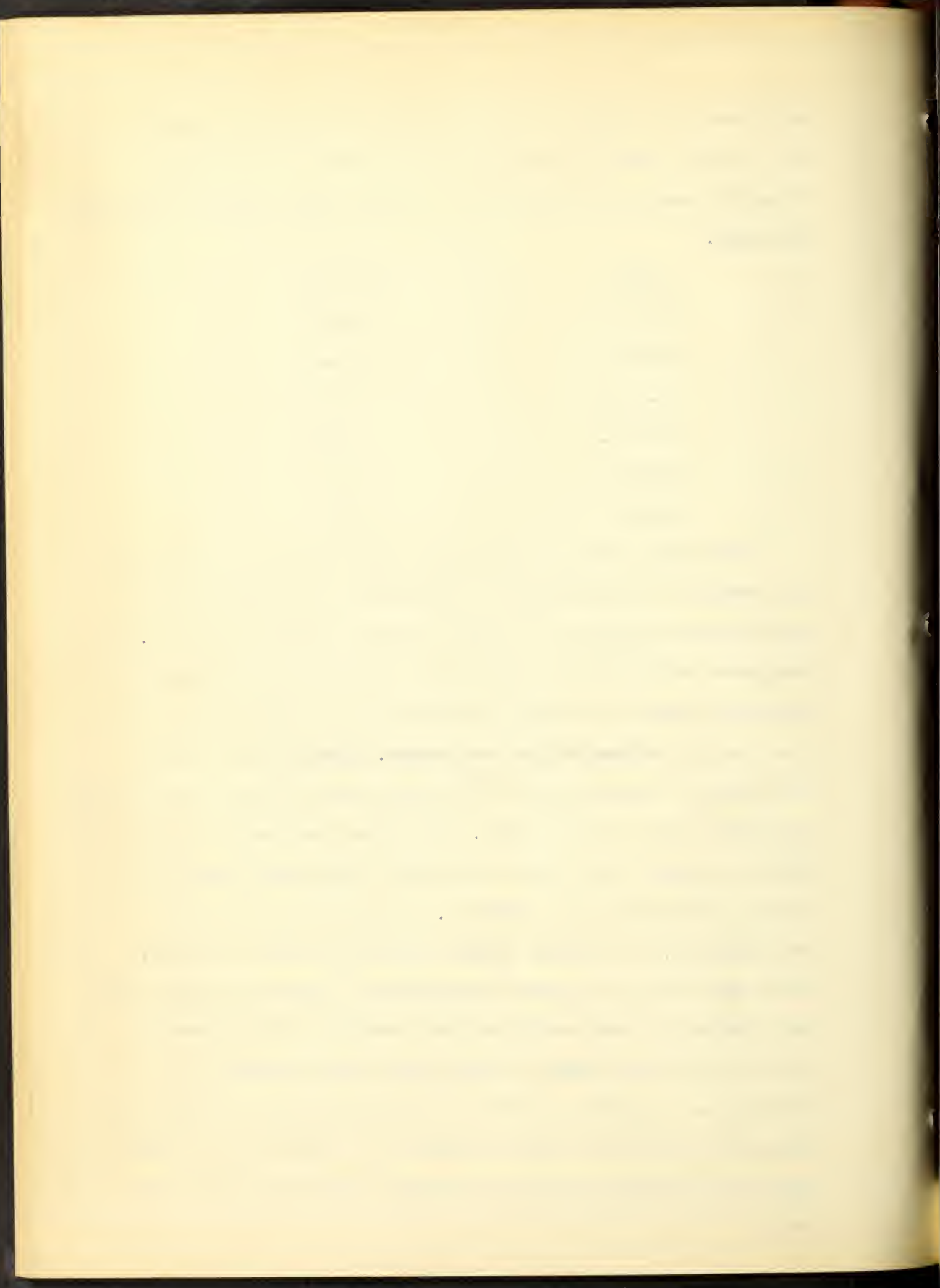
Class C Fire:

Fire or explosion arising, or lightning striking, while the aircraft is in flight, but excluding loss or damage caused by fire or explosion following collision with ground or other object.

FIRE, EXPLOSION AND LIGHTNING

Class D Fire

Fire or explosion arising, or lightning striking, while the aircraft is in flight, and including loss or damage caused by fire or explosion following collision with ground or other object.



WHILE NOT IN FLIGHT

FIRE AND TRANSPORTATION

Class A Fire

Fire or explosion arising, or lightning striking, while the aircraft is not in flight, but excluding loss or damage from fire or explosion arising during, or as a result of, the starting, attempting to start, or running of any engine installed in the aircraft.

Class B Fire

Fire or explosion arising, or lightning striking, while the aircraft is not in flight, and including loss or damage from fire or explosion arising during, or as a result of, the starting, attempting to start, or running of any engine installed in the aircraft.

Transportation

Loss or damage to the aircraft caused by stranding, sinking, burning, collision or derailment of any public conveyance in or upon which the aircraft, when properly dismantled and prepared for shipment, is being transported (excluding all shipments by water unless incidental to rail shipments).

TORNADO, CYCLONE AND WINDSTORM

Loss or damage to the aircraft caused by the direct action of tornado, cyclone or windstorm, but excluding loss or damage caused by hail, rain, sleet, snow, earthquake, flood or water.

THEFT, ROBBERY AND PILFERAGE

Theft, robbery and pilferage, excepting by any person or persons in the Assured's household, or in the Assured's service or employment, whether or not the theft, robbery or pilferage occurs during the hours of such service or employment, and excepting loss suffered by the Assured from voluntary parting with the title and/or possession, whether or not induced to do so by any fraudulent scheme, trick, device or false pretense or otherwise.

MOORING ~~AND LAND DAMAGE~~

Flying Boats, Seaplanes and Amphibian Aircraft

While on Water

Loss or damage to the aircraft while anchored or moored to a dock, wharf, pier or buoy, caused by hail, stranding, sinking, striking of such dock, wharf, pier, or buoy, striking by other aircraft, vessel or floating or submerged object (excluding aircraft, vessel, or other object owned or operated by the Assured or any of his employees), excepting loss or damage caused by ice.

LAND DAMAGE

Land Alighting Aircraft and Amphibian Aircraft

While on Land

Loss or damage to the aircraft while not in flight caused by hail, striking by other aircraft, vehicle or other object (excluding aircraft, vehicle or other object owned or operated by the assured or any of his employees) or the striking of any stationary object whether or not such stationary object is owned by the assured or any of his employees, but excluding any loss or damage occasioned by or arising during taxiing into, within or out from a hangar or place of housing.

GENERAL CONDITIONS

1. CANCELLATION BY NON-PAYMENT OF PREMIUM:

If the premium be not paid within thirty days from the date of attaching, this policy shall be null and void during the time the premium is past due and unpaid.

2. ONE INDIVISIBLE INTEREST:

The aircraft and engine or engines thereof, for the purpose of this insurance, are one indivisible interest, notwithstanding the fact that this policy may show a separate amount of insurance on the engine or engines.

3. SUBSTITUTION OF ENGINES:

The Assured may, at any time, during the currency of this policy, substitute engines of like make, power and airworthy condition. If the value of the substituted engines increases the value of the aircraft, immediate notice thereof shall be given the Company in writing, and additional premium paid thereon.

4. LIMIT OF LIABILITY:

The Company shall not be liable as to any one aircraft for an amount greater than the value thereof declared in the Schedule of Coverages less depreciation at the rate stated in the Schedule of Declarations, or the actual cash value thereof at the time of loss or damage, whichever is less, but not exceeding the amount which it would cost on the agreed basis to repair or replace the same, in whole or in part, with material or parts of like kind and quality, within a reasonable time after such loss or damage, and without compensation for the loss of use of the property; the actual cash value to be determined by the Company and the Assured or, if they are unable to agree, then by appraisal as hereinafter provided.

5. CO-INSURANCE:

The Company shall not be liable for a greater proportion of the amount stated in paragraph 4 above than the declared value of the aircraft suffering loss or damage bears to the actual cash value thereof immediately prior to the loss, or to the depreciated value on the date of attachment of this policy determined as stated below, whichever is less, nor if there is other insurance upon the aircraft, for a greater proportion of such amount than such declared value bears to the total amount of insurance covering the aircraft at the time of loss, whether valid or not and whether collectible or not. The depreciated value of the aircraft on the date of attachment shall be not less than:

- (a) *If purchased unused*—the retail sales price prevailing on said date of the make and type of aircraft insured (less dealer's discount, if any received), less depreciation at the rate of one-thirty-sixth per month from date of manufacture.
- (b) *If purchased as a used aircraft*—the purchase price less depreciation at the rate of one-thirty-sixth per month from date of purchase but not exceeding the depreciated value computed in accordance with sub-section (a) above.

6. DEDUCTIBLE:

From the amount of any claim, when determined, there shall be deducted the amount specified as deductible (if any), in the Schedule of Coverages, and the Company shall be liable only for loss or damage in excess of that amount.

7. LOSS FOR WHICH BAILEE IS LIABLE:

The Company shall not be liable for loss or damage to any property insured hereunder while in the possession of a carrier and/or bailee under a contract, stipulation or assignment, whereby the benefit of this insurance is sought to be made available to such carrier and/or bailee. Where loss or damage occurs for which a carrier and/or bailee may be liable and which would otherwise be covered hereunder, the Company will advance to the Assured by way of loan, without interest, the money equivalent to such loss or damage, which loan shall in no circumstances affect the question of the Company's liability hereunder and shall be repaid to the extent of the net amount collected, by or for account of the Assured, from the carrier and/or bailee after deducting cost and expense of collection.

Any act or agreement by the Assured, prior or subsequent hereto, whereby any right of the Assured to recover the full value of, or amount of damage to any property lost or damaged and insured hereunder, against any carrier, bailee or other party liable therefor, is released, impaired or lost, shall render this policy null and void, but the Company's right to retain or recover the premium shall not be affected. The Company is not liable for any loss or damage which, without its consent, has been settled or compromised by the Assured.

8. MISREPRESENTATION AND FRAUD:

This entire policy shall be void if the Assured has concealed or misrepresented any material fact or circumstance concerning this insurance or the subject thereof; or in case of any fraud, attempted fraud, or false swearing by the Assured touching any matter relating to this insurance or the subject thereof, whether before or after a loss.

9. TITLE AND OWNERSHIP:

This entire policy shall be void, unless otherwise provided by agreement in writing added hereto:

- (a) If the interest of the Assured in the subject of this insurance be or become other than unconditional and sole lawful ownership; or if the subject of the insurance has ever been stolen or unlawfully taken prior to the issuance of this policy and not returned to the lawful owner prior to the issuance of this policy, or in case of transfer or termination of the interest of the Assured other than by death of the Assured; or in case of any change in the nature of the insurable interest in the property described in the attached Schedule of Coverages either by sale or otherwise; or
- (b) If this policy or any part thereof shall be assigned before loss.

10. LIEN OR ENCUMBRANCE:

Unless otherwise provided by agreement in writing attached hereto, the Company shall not be liable for loss or damage to any property insured hereunder:

- (a) While encumbered by any lien or mortgage; or
- (b) While rented or leased.

11. INSPECTION OF PROPERTY INSURED:

Any duly authorized representative of the Company shall be permitted to examine the aircraft and/or property insured at any reasonable time.

12. PROTECTION OF SALVAGE:

In the event of any loss or damage, whether insured against hereunder or not, the Assured shall protect the property from other or further loss or damage and any such other or further loss or damage due directly or indirectly to the failure to protect shall not be recoverable under this policy. Any such act of the Assured or the Company or its duly authorized agents in recovering, saving or preserving the property described herein, shall be considered as done for the benefit of all concerned and without prejudice to the rights of either party, and where the loss or damage suffered constitutes a claim under this policy, then all reasonable expenses thus incurred shall also constitute a claim under this policy, provided, however, that the Company shall not be responsible for the payment of a reward offered for the recovery of the property insured, unless authorized in writing by the Company.

13. ASSISTANCE AND COOPERATION:

In the event of loss or damage, and whenever requested by the Company, the Assured will through such counsel as the Company may designate, make claim upon and sue any carrier, bailee or other person believed to be liable for such loss or damage, and will assist in the recovery of the property insured here-

under, in effecting settlement, securing evidence, obtaining the attendance of witnesses and prosecuting suits to such an extent and in such a manner as is deemed desirable by the Company, and the Company shall reimburse the Assured for any expense incurred at its request.

14. NOTICE OF LOSS:

In event of any loss or damage, notice thereof shall be immediately communicated by telegram to the Aviation Managers of the Company. Such telegram shall identify the aircraft in question by its Department of Commerce number, the name of the Assured, the name of the pilot, his type of license and the number thereof, and shall briefly state the estimated extent of the loss or damage, and the Assured shall forward by letter within forty-eight hours thereafter, full particulars of said loss or damage.

In the event of Theft, Robbery or Pilferage, the Assured shall also give immediate notice thereof to the Police.

15. PROOF OF LOSS:

Within sixty (60) days after loss or damage, unless such time shall be extended in writing by the Aviation Managers of the Company, the Assured shall render to the said Aviation Managers a proof of loss signed and sworn to by the Assured stating the place, time and cause of the loss or damage, the interest of the Assured and of all others in the property, the sound value thereof and the amount and nature of the loss or damage thereto, all incumbences thereon, changes in title, and all other insurance whether valid and/or collectible or not, covering said property.

16. DOCUMENTS TO SUBSTANTIATE CLAIMS:

All claims must be supported by log-books (if not destroyed) for pilot, aircraft and engine, kept up to date as required by the United States Department of Commerce, original invoices, or certified copies thereof, covering the purchase of the aircraft and all equipment subsequently acquired which may be insured under this policy, and in the case of partial loss or damage, original invoices, or certified copies thereof, covering costs of repairs or replacements. The Assured, as often as is required by the Company, shall exhibit to any person designated by the Company all that remains of the property insured; shall submit to examination under oath by any person designated by the Company, and subscribe to the same, and shall produce for examination all books of accounts, bills, invoices and other vouchers, or certified copies thereof if originals be lost, at such reasonable place as may be designated by the Company, and shall permit extracts thereof to be made.

17. APPRAISAL:

In case the Assured and the Company shall fail to agree as to the amount of loss or damage, each shall, on the written demand of either, select a competent and disinterested appraiser. The appraisers shall first select a competent and disinterested umpire; and failing for fifteen (15) days to agree upon such umpire, then, on request of the Assured or the Company, such umpire shall be selected by a judge of a court of record in the county and State (or foreign jurisdiction) in which the appraisal is pending. The appraisers shall then appraise the loss and damage, stating separately sound value (actual cash value as defined in paragraph 4 above) and loss or damage; and failing to agree, shall submit their differences only to the umpire. A decision in writing of any two, when filed with the Company, shall determine the amount of sound value and loss or damage. Each appraiser shall be paid by the party selecting him and the expenses of appraisal and umpire shall be paid by the parties equally.

18. ABANDONMENT—RETURN OF STOLEN PROPERTY:

It shall be optional with the Company to take all or any part of the property at the agreed or appraised value when appraisal is had as herein provided, but there can be no abandonment to the Company. Where theft is insured the Company shall have the right, at any time before actual payment of the claim hereunder, to return the stolen property with compensation for physical damage sustained.

19. PAYMENT OF LOSS:

The Company shall not be held to have waived any provision or condition of this policy, or any forfeiture thereof, by any requirement, act or proceeding on its part relating to the appraisal, or to any examination herein provided for, and the loss (the amount of any unpaid premiums and all other indebtedness of the Assured to the Company being first deducted) shall in no event become payable until sixty (60) days after the notice, ascertainment, estimate and verified proof of loss herein required have been received by the Company, and if appraisal is demanded, then, not until sixty (60) days after the decision has been filed by the appraisers.

20. REINSTATEMENTS:

In the event of any diminution of this policy by reason of any loss or damage, the same shall be reinstated from date of completion of repairs unless written notice to the contrary be given to the Company by the Assured. The reinstatement premium shall be computed on a pro rata basis and shall become immediately due and payable.

21. SUBROGATION:

The Company may require from the Assured an assignment of all right of recovery against any party for loss or damage to the extent that payment therefor is made by the Company.

22. WAIVER:

No one shall have power to waive any provision or condition of this policy except as by the terms of this policy may be the subject to agreement added hereto, nor shall any such provision or condition be held to be waived unless such waiver shall be in writing added hereto, nor shall any provision or condition of this policy or any forfeiture be held to be waived by any requirements, act or proceeding on the part of this Company relating to appraisal or to any examination herein provided for; nor shall any privilege or permission affecting the insurance hereunder exist or be claimed by the insured unless granted herein or by rider added hereto.

23. CANCELLATION:

This entire policy (or the coverage given hereby to one or more of the aircraft insured hereunder) shall be cancelled at any time at the request of the Assured, and this Company shall, except in the circumstances hereinafter mentioned, upon demand, and surrender of this policy, refund the excess of paid premium above the short rate premium for the expired term in accordance with the table endorsed on this policy. This Company shall have a like privilege of cancellation at any time by giving the Assured five (5) days' written notice of cancellation with or without tender of the excess of paid premium above the pro rata premium for the expired term, which excess, if not tendered, shall be refunded on demand. Notice of cancellation mailed to the address of the Assured stated in the policy shall be sufficient notice. Where a special provision for cancellation and notice of such cancellation is required by statutory enactment in the State where this policy is issued, the conditions of this cancellation clause are to be deemed amended so as to conform thereto.

No return premium is to be paid the Assured as to any aircraft on which a loss under this policy, adjustable on the basis of total loss, has occurred.

EXPRESS EXCEPTIONS AS TO RISKS COVERED

24. The Company shall not be liable for loss or damage:

- While the aircraft is outside of the geographical limits stated in the Schedule of Declarations.
- When caused directly or indirectly by war, invasion, strikes, insurrection, riots, civil commotion, military, naval or usurped power, or by order of any civil authority, nor for any intentional damage by the Assured or his agent.
- To wearing apparel or personal effects; nor to any equipment or furnishings unless attached to the aircraft and standard equipment for make and type aircraft.
- While the aircraft is operated by a person other than a pilot specifically named in the Schedule of Declarations; or by a pilot so named, (if a transport or limited commercial pilot), but who is not licensed, by the United States Department of Commerce, to operate aircraft of the type and class insured, and in said aircraft to carry persons for hire; or whose license has been revoked, suspended, changed, or has expired and not been renewed at the time of loss or damage.
- While the aircraft is being used for instructional flying, either dual or solo.
- While transporting or containing explosives or inflammable materials, excepting fuel carried in the standard gasoline tanks for make and type of the aircraft, and necessary signalling devices.
- While the aircraft is being used for any purpose whatsoever other than that stated in the Schedule of Declarations.
- While the aircraft is in flight at any time between one-half hour after sunset and one-half hour before sunrise, except for the completion of a flight started during daylight which could reasonably have been expected to have been completed prior to one-half hour after sunset.
- While the aircraft is engaged in or operated in connection with acrobatic flying, (intentional manoeuvres not necessary to air navigation), stunt flying, racing, speed tests or any other type of flying of an unusual and unnecessary nature.
- While water alighting aircraft is flying inshore beyond safe gliding distance of water suitable for a landing or while land-alighting aircraft is flying offshore beyond safe gliding distance of land.
- Except in the case of a forced landing, while the aircraft is landing elsewhere than on a regularly established airport, or space of water, suitable for safe landing (as to size, condition and surrounding objects); while taking off after a forced landing from a place other than a regularly established airport, or space of water suitable for safe take-off (as to size, condition and surrounding objects), unless the Aviation Managers of the Company have first been given the option of accepting the liability therefor or paying the expenses of dismantling, transporting and re-assembling the aircraft at the nearest place for a safe take-off.
- When "in flight," if Department of Commerce license has been revoked or suspended, or before approval of Department of Commerce inspector after reconstruction or any material structural change or repair, or change or repair liable to affect the customary performance of the aircraft.
- While any engine installed in the aircraft insured is running in any hangar or housing or as the result of the running of any engine of any aircraft in a hangar or housing owned, leased or controlled by the Assured; or while the aircraft insured is being fueled in any hangar or housing, or as a result of the fueling of any aircraft in any hangar or housing owned, leased or controlled by the Assured.
- From Tornado, Cyclone, Windstorm or Theft, Robbery or Pilferage, when aircraft is not housed in hangar, except for not in flight taxi-ing and reasonable parking during the daytime with adequate personnel available to properly safeguard the aircraft.

WARRANTIES

25. The Assured warrants that at all times during the currency of this policy, all federal, state and local laws, rules or regulations affecting the inspection, maintenance and/or operation of the aircraft will be fully complied with. The Assured further warrants that he will exercise due diligence to comply with all of said laws, rules or regulations affecting the inspection, maintenance and/or operation of any premises owned or controlled by him, in or on which said aircraft is kept, and to prevent undue exposure of the aircraft to any of the perils insured hereunder and further warrants that every precaution will be observed by him in the safekeeping of the aircraft and the inspection, maintenance and/or operation of said premises which any prudent owner or operator would reasonably be presumed to exercise.

SUIT AGAINST COMPANY

26. No suit or action on this policy or for the recovery of any claim hereunder shall be sustainable in any court of law or equity, unless the Assured shall have fully complied with all the foregoing requirements, nor unless commenced within twelve (12) months next after the happening of the loss; provided, that where such limitation of time is prohibited by the laws of the State wherein this policy is issued, then, and in that event, no suit or action under this policy shall be sustainable unless commenced within the shortest limitation permitted under the laws of such State.

The Assured hereinbefore referred to is the Assured named in the Schedule of Declarations, and the Assured by acceptance of this policy warrants the statements in the Schedule of Declarations and Section A of the Schedule of Coverages to be true.

IN WITNESS WHEREOF, this Company has caused this policy to be executed by its President, and attested by its Secretary, but this policy shall not be valid unless a Schedule of Declarations and Coverages be attached hereto and countersigned by the United States Aviation Underwriters, Incorporated, Aviation Managers of the Company, or by a duly authorized agent thereof.

17. Special Conditions and Warranties—1. If the base of operation or nature of operation is changed, immediate notice thereof must be given the Aviation Managers of the Company in writing.

2. Notwithstanding the regulations of the Department of Commerce to the effect that aircraft shall not be operated at an altitude of less than 500 feet, it is understood and agreed that this policy shall not be invalidated when weather conditions arising during the course of a trip necessitate flying below 500 feet in order to reach the nearest suitable airport of refuge and providing always that flights are not attempted or undertaken when the prevailing conditions at the airport of departure or the weather reports for the route to be flown show the ceiling to be less than 500 feet at any point.

.....

SCHEDULE OF DECLARATIONS AND COVERAGES

Attached to and forming part of Aircraft Policy No. _____
issued by _____

SCHEDULE OF DECLARATIONS

Item

1. Name of Assured _____
2. Loss, if any, payable to _____
3. The Assured is _____
(State whether individual, co-partnership, corporation, receiver or trustee)
4. Address of Assured _____
5. Address of home airport from which aircraft will be principally operated _____
6. The Assured's business or profession is _____
7. The Assured's interest in the aircraft described in Section A of the Schedule of Coverages is that of _____
8. The aircraft described is not mortgaged or otherwise encumbered except as follows: _____
9. This policy covers only while the aircraft is (are) used for the following purpose (s) _____
10. The following pilot (s) only is (are) approved to operate the within described Aircraft _____
11. Geographical limits. (This policy covers the aircraft only while confined within the following limits) _____
12. The Insurance is to attach and cover from the _____ day of _____, 19_____, to the _____ day of _____, 19_____, beginning and ending with _____ Standard Time.
13. The risk was insured during the past year in _____
(Name of company carrying risk)
14. No Company has at any time cancelled or refused to renew insurance, except as follows: _____
15. The agreed minimum basis of depreciation for aircraft and engines insured shall be as follows:
(A)—Aircraft, excluding engine (s): _____ per month or pro rata thereof from _____ based on \$_____.
(B)—Engine (s): _____ per hour of operation, but not less than _____% per annum or pro rata thereof from _____ based on \$_____.
16. Agreed maximum basis of replacement and labor costs for damage to Aircraft insured is as follows: The Company shall be liable for the cost of repairs and/or replacements only when incurred with its prior written consent and approval. Such costs shall not exceed:
(a) When repairs are effected by other than the Assured:
 1. The amount paid by the Assured for material, parts and labor (excluding extra charges for overtime), less discounts; and
 2. Railway freight charges (and trucking charges to and from rail depot) from place of accident to place of repair, and return to place of accident, or Assured's home airport, whichever be nearer, or, at the option of the Company, the cost of oil and gas incurred in flying the aircraft to such place of return; provided, however, that the exercise of such option by the Company shall in no way alter or modify the provisions of this policy, or the perils insured against, or increase the Company's liability hereunder.
(b) When repairs are affected by the Assured:
 1. Amount paid by Assured for material and parts, less all discounts, and for actual wages plus _____% with no amount added for overtime or overhead; and
 2. Railway freight charges (and trucking charges to and from rail depot) from place of accident to place of repair, and return to place of accident, or Assured's home airport, whichever be nearer, or, at the option of the Company, the cost of oil and gas incurred in flying the aircraft to such place of return; provided, however, that the exercise of such option by the Company shall in no way alter or modify the provisions of this policy, or the perils insured against, or increase the Company's liability hereunder.

(OVER)

In event of damage to the Aircraft, you are requested to forward, with the notice of loss, three
(3) photographs of the Aircraft, taken from different angles, prior to removal.

Item

17. Special Conditions and Warranties—1. If the base of operation or nature of operation is changed, immediate notice thereof must be given the Aviation Managers of the Company in writing.

2. Notwithstanding the regulations of the Department of Commerce to the effect that aircraft shall not be operated at an altitude of less than 500 feet, it is understood and agreed that this policy shall not be invalidated when weather conditions arising during the course of a trip necessitate flying below 500 feet in order to reach the nearest suitable airport of refuge and providing always that flights are not attempted or undertaken when the prevailing conditions at the airport of departure or the weather reports for the route to be flown show the ceiling to be less than 500 feet at any point.

SCHEDULE OF COVERAGES

SECTION A

PARTICULARS OF AIRCRAFT

Line No.	AIRCRAFT				ENGINE (S)			Prevailing Retail Sales Price at Inception of Policy
	Dep't of Commerce License Number	Make and Model	Date of Manufacture	Serial Number	Make and Model	Serial No.	Hours Run	
Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9
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SECTION B

INSURANCE ON AIRCRAFT

Each aircraft described in Section A is insured solely against such of the perils enumerated in vertical columns numbered 4 to 8 of Section B, as are specifically noted on the corresponding line of Section B, by the insertion, in vertical column 4, of the class of fire coverage, or in vertical columns 5 to 8, of the amount deductible.

Line No.	DECLARED VALUE		FIRE	PERILS OF THE AIR	TORNADO, CYCLONE AND WINDSTORM	THEFT, ROBBERY AND PILFERAGE	MOORING AND LAND DAMAGE	RATE AND PREMIUM	
	Engine (s)	Total	As per Class or Classes Designated	Amount Deductible	Amount Deductible	Amount Deductible	Amount Deductible	Rate per Aircraft	Premium per Aircraft
Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	Col. 10
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15									

TOTAL PREMIUMS \$.....

Countersigned at, this.....day of.....19.....

UNITED STATES AVIATION UNDERWRITERS, Incorporated

By.....
Aviation Managers

SCHEDULE OF COVERAGES

SECTION A (CONTINUED)

PARTICULARS OF AIRCRAFT

Line No.	AIRCRAFT				ENGINE (S)			Prevailing Retail Sales Price at Inception of Policy
	Dep't of Commerce License Number	Make and Model	Date of Manufacture	Serial Number	Make and Model	Serial No.	Hours Run	
Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9
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SECTION B (CONTINUED)

INSURANCE ON AIRCRAFT

Each aircraft described in Section A is insured solely against such of the perils enumerated in vertical columns numbered 4 to 8 of Section B, as are specifically noted on the corresponding line of Section B, by the insertion, in vertical column 4, of the class of fire coverage, or in vertical columns 5 to 8, of the amount deductible.

Line No.	DECLARED VALUE		FIRE	PERILS OF THE AIR	TORNADO, CYCLONE AND WINDSTORM	THEFT, ROBBERY AND PILFERAGE	MOORING AND LAND DAMAGE	RATE AND PREMIUM	
	Engine (s)	Total	As per Class or Classes Designated	Amount Deductible	Amount Deductible	Amount Deductible	Amount Deductible	Rate per Aircraft	Premium per Aircraft
Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	Col. 10
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TOTAL PREMIUMS \$.....

Countersigned at....., this.....day of..... 19.....

UNITED STATES AVIATION UNDERWRITERS, Incorporated

By.....
Aviation Managers



SPECIMEN HULL POLICY

Short Rate Cancellation Table

	Per cent. of Annual Prem.
1 day	2
2 days	4
3 "	5
4 "	6
5 "	7
6 "	8
7 "	9
8 "	9
9 "	10
10 "	10
11 "	11
12 "	12
13 "	13
14 "	13
15 "	14
16 "	14
17 "	15
18 "	16
19 "	16
20 "	17
25 "	19
30 "	20
35 "	23
40 "	26
45 "	27
50 "	28
55 "	29
60 "	30
65 "	33
70 "	36
75 "	37
80 "	38
85 "	39
90 " or 3 months.....	40
105 "	45
120 " or 4 months.....	50
135 "	55
150 " or 5 months.....	60
165 "	65
180 " or 6 months.....	70
195 "	73
210 " or 7 months.....	75
225 "	78
240 " or 8 months.....	80
255 "	83
270 " or 9 months.....	85
285 "	88
300 " or 10 months.....	90
315 "	93
330 " or 11 months.....	95
360 " or 12 months.....	100

AIRCRAFT POLICY

Expires.....

Insured

No.

UNITED STATES AVIATION UNDERWRITING
INCORPORATED

Managers

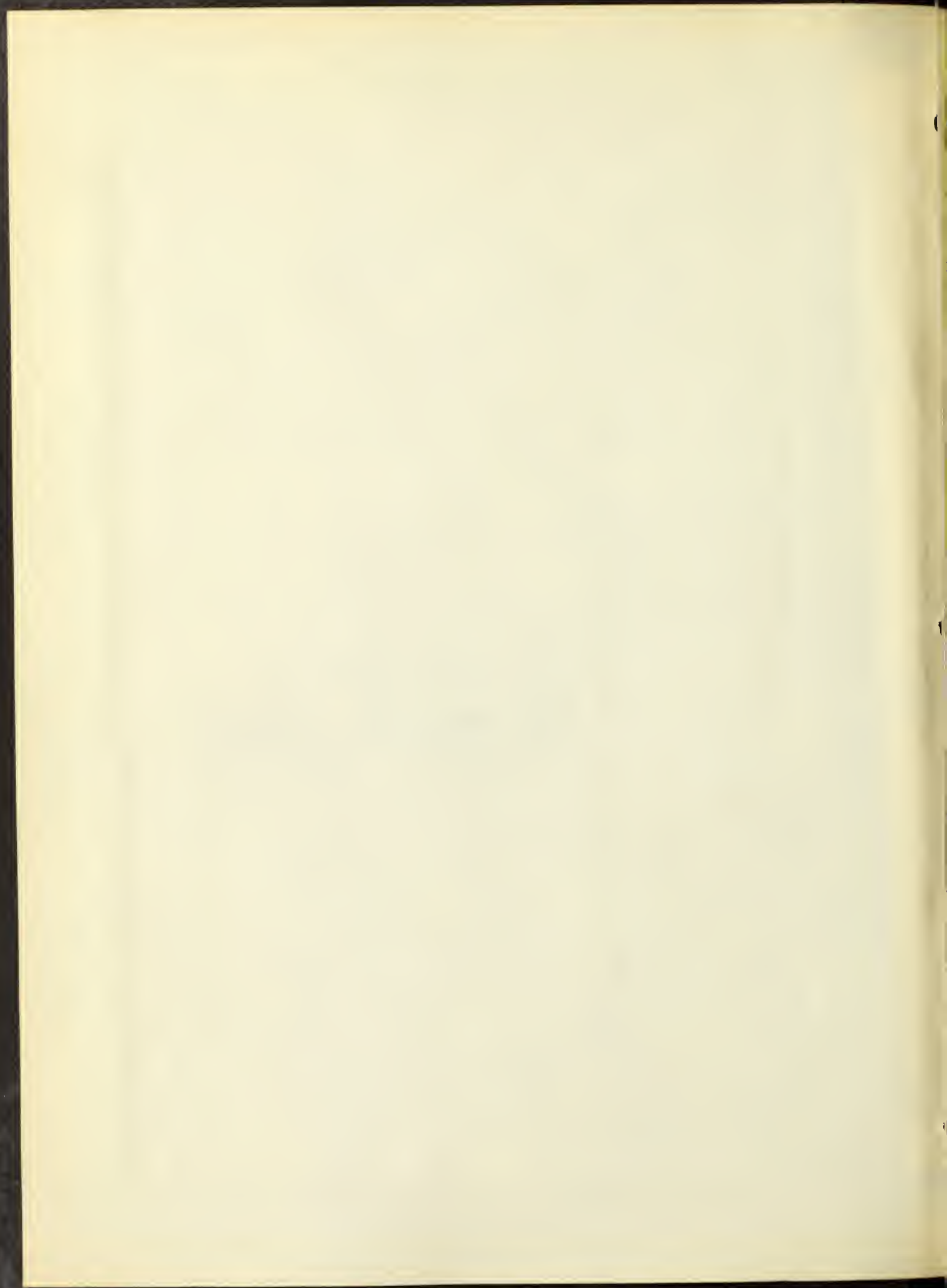
80 JOHN STREET
NEW YORK

PLEASE READ YOUR POLICY

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This policy is now obtainable in any one of the following Companies, Members of the UNITED STATES AIRCRAFT INSURANCE GROUP, through the Aviation Managers, the

United States Aviation Underwriters, Inc.

80 John Street, New York City

Aetna Casualty and Surety Company

Century Indemnity Company

Hartford Accident and Indemnity Company

Maryland Casualty Company

New Amsterdam Casualty Company

United States Fidelity and Guaranty Company

In Consideration of the premium set forth in the Schedule of Coverages and of the Statements and Warranties contained in the Schedule of Declarations, both of which are hereto attached and made a part hereof, DOES HEREBY AGREE TO INSURE the assured named in Item 1 of the Schedule of Declarations, in accordance with the provisions of the Insuring Agreements, but subject to all terms, limits, conditions and warranties contained in this policy, as respects accidents occurring within the policy period as set out in Item 10 of the Schedule of Declarations while within the geographical limits or service approved in the said Schedule of Declarations, caused by or resulting from the ownership, maintenance or use of any Aircraft listed and described in the Schedule of Coverages.

INSURING AGREEMENTS

I. The company shall only be liable under that clause or those clauses of the following insuring clauses (A and/or B and/or C) as respects each separate Aircraft listed and described as aforesaid, for which a specific limit of liability, corresponding both to Aircraft and clause, is set forth in the appropriate column and line of the Schedule of Coverages and subject thereto and to all other terms, limits, conditions and warranties of the policy, the insurance granted is as follows:

LEGAL LIABILITY FOR BODILY INJURIES TO OR DEATH OF PUBLIC

CLAUSE A. Against loss from liability imposed by law upon the assured for damages on account of bodily injuries, including death resulting therefrom, accidentally suffered or alleged to have been suffered by any person or persons (except any person in, on, boarding or alighting from the hereinafter mentioned Aircraft) caused by or through the ownership, maintenance or use of the Aircraft described in the Schedule of Coverages and covered under this clause as indicated by the limits of liability therefor, set forth in columns 7 and 8 of the Schedule of Coverages, and used for the purpose set forth in the Schedule of Declarations, provided such bodily injuries or death are suffered as a result of an accident occurring within the period of the policy aforesaid. The company's limit of liability under this clause on account of one person so injured or killed shall be the limit expressed for one person in column 7 of the Schedule of Coverages and, subject to the same limit for each person, the company's total limit of liability for any one accident so injuring or killing more than one person shall be the limit expressed for one accident in column 8 of said Schedule of Coverages, but said limits shall apply only to the Aircraft described in the same line of the Schedule of Coverages in which said limits are set forth.

LEGAL LIABILITY FOR BODILY INJURIES TO OR DEATH OF PASSENGERS

CLAUSE B. Against loss from liability imposed by law upon the assured for damages on account of bodily injuries, including death resulting therefrom, accidentally suffered or alleged to have been suffered by any person or persons while in, on, boarding or alighting from the Aircraft described in the Schedule of Coverages and covered under this clause as indicated by the limit of liability therefor, set forth in column 9 of the Schedule of Coverages, and used for the purpose set forth in the Schedule of Declarations, provided such bodily injuries or death are suffered as a result of an accident occurring within the policy period aforesaid. The company's limit of liability under this clause, on account of one such passenger so injured or killed, shall be the limit expressed for one passenger in column 9 of the Schedule of Coverages, and, subject to the same limit for each passenger, the company's total limit of liability for any one accident so injuring or killing more than one passenger shall be the limit expressed for one passenger in column 9 of the Schedule of Coverages times the passenger capacity as shown in column 5 of the said Schedule of Coverages, but said limits shall apply only to the Aircraft described in the same line of the Schedule of Coverages in which said limit is set forth.

LEGAL LIABILITY FOR DAMAGE TO PROPERTY OF OTHERS

CLAUSE C. Against loss from liability imposed by law upon the assured for damages (including as a part thereof loss necessarily resulting from loss of use) to property of every description (excluding property of the assured and/or property in the custody of the assured and/or property rented or leased by the assured and/or property carried in or upon any Aircraft of the assured, or in or upon any Aircraft in the custody of the assured) resulting from an accident occurring within the policy period aforesaid and caused by or through the ownership, maintenance or use of any Aircraft described in the Schedule of Coverages and covered under this clause as indicated by the limit of liability therefor, set forth in column 10 of the Schedule of Coverages, and used for the purpose set forth in the Schedule of Declarations, provided that the company's liability for such damage shall in no event exceed the amount set forth in column 10 of the Schedule of Coverages on account of any one accident, but said limit shall apply only to the Aircraft described in the same line of the Schedule of Coverages in which said limit is set forth.

INVESTIGATIONS

II. Further, the company will investigate all accidents and claims covered hereunder and defend in the name and on behalf of the assured all suits thereon, even if groundless, of which notices are given as hereinafter required and will pay, irrespective of the limit of liability provided for in Insuring Agreement I, the expense (including as a part thereof Court costs, all premiums on release-of-attachment and/or appeal bonds required in any such proceedings, and all interest accruing after entry of a judgment for any part of which the company is liable hereunder and up to the date of payment, tender or deposit in court, by the company of its share of such judgment) incurred by the company in such investigation and defense.

INSOLVENCY AND BANKRUPTCY

III. The bankruptcy or insolvency of the assured shall not release the company from the payment of damages for injuries or death sustained or loss occasioned within the provisions of this policy, and the prepayment of any judgment that may be recovered against the assured upon a claim covered by this policy, is not a condition precedent to any right of action against the company upon this policy, but the company is bound to the extent of its liability under this policy, to pay and satisfy such judgment, and an action may be maintained upon such judgment by the injured person or his or her heirs or personal representatives as the case may be, to enforce the liability of the company as in the policy set forth and limited. But all the defenses of the company against the assured hereunder, shall be available to it against all other parties.

EXCLUSIONS

IV. This policy does not cover:

- (a) Any obligation assumed by or imposed upon the assured by any Workmen's Compensation Law, agreement or plan.
- (b) Any obligation or liability assumed by the assured for others under any contract or agreement, expressed or implied.

(c) Accidents to assured's employees while engaged in duties of their employment.

Nor does this policy cover any liability in respect to injury, death or damage caused directly or indirectly by the ownership, maintenance or use of any Aircraft described herein during or in consequence of:

(d) The operation of the Aircraft for any unlawful purpose; or flights or attempts thereof in violation of any government or state regulation for civil aviation, except that it is understood that notwithstanding the Department of Commerce regulation to the effect that Aircraft shall not be operated at an altitude of less than 500 feet, this policy shall not be invalidated should weather conditions arising during a flight already undertaken necessitate flying at a lesser height in order to reach the nearest suitable airport of refuge, providing always that no flight is attempted or undertaken when prevailing weather conditions at the airport of departure or weather reports for the routes to be flown show the ceiling to be less than 500 feet at any point.

(e) Operation of Aircraft carrying a number of passengers in excess of the passenger capacity as shown in column 5 of the Schedule of Coverages; or operation of Aircraft carrying passengers and/or crew and/or freight and/or merchandise and/or mail and/or supplies in excess of the number of passengers and/or gross weight permitted in the approved type certificate issued by the Department of Commerce for the make and type of Aircraft and/or the license issued to the Aircraft, even though the passenger capacity as stated in column 5 is not exceeded.

(f) Operation of Aircraft outside of the geographical limits stated in the Schedule of Declarations; or operation of Aircraft by a person other than a pilot specifically named in the Schedule of Declarations; or by a pilot so named (if a transport or limited commercial pilot) but who is not licensed by the United States Department of Commerce to operate Aircraft of the type and class insured and to carry persons for hire in said Aircraft; or whose license has been revoked, suspended, changed, or has expired and not been renewed at the time of accident; or operation of Aircraft for any purpose whatsoever other than that stated in the Schedule of Declarations.

(g) War, invasion, strikes, insurrection, riots, civil commotion, military, naval or usurped power; or operation of Aircraft transporting or containing explosives or inflammable materials, except fuel carried in the standard gasoline tanks for make and type of the Aircraft, and necessary signaling devices; or running of any engine installed in the Aircraft in any hangar or place of housing.

(h) Instructional flying, either dual or solo.

(i) Operation of Aircraft at any time between one-half hour after sunset and one-half hour before sunrise, except for the completion of a flight started during daylight which could reasonably have been expected to have been completed prior to one-half hour after sunset.

(j) Acrobatic flying (intentional maneuvers not necessary to air navigation), stunt flying, racing, speed tests or any other type of flying of an unusual and unnecessary nature.

(k) Water-landing Aircraft flying inshore beyond safe gliding distance of water suitable for a landing, or land-landing Aircraft flying offshore beyond safe gliding distance of land.

(l) Except in the case of a forced landing, landing of Aircraft elsewhere than on a regularly established airport, or space of water, suitable for safe landing (as to size, condition and surrounding objects); taking-off of Aircraft after a forced landing from a place other than a regularly established airport, or space of water, suitable for safe take-off (as to size, condition and surrounding objects) unless the take-off is approved by the Aviation Managers of the company.

(m) Operation of Aircraft if its Department of Commerce license has been revoked or suspended, or before approval of Department of Commerce inspector after reconstruction or any material structural change or repair, or change or repair liable to affect the customary performance of the Aircraft.

SUBJECT, NEVERTHELESS, TO THE FOLLOWING CONDITIONS: ACCIDENT AND SUIT NOTICE

V. Immediate written notice of any accident, like notice of any claim, and like notice of any suit resulting therefrom, with every summons or other process, must be forwarded to the Home Office of the company, or to any duly authorized agent of the company, provided, however, that failure to give such immediate notice shall not invalidate any claim made by the assured, if it shall be shown not to have been reasonably possible to give such notice immediately and that notice was given as soon as was reasonably possible. Whenever requested by the company, the assured shall aid in securing information, evidence and the attendance of witnesses, and shall at all times render to the company all reasonable cooperation and assistance.

ACTION AGAINST COMPANY

VI. No action shall lie against the company to recover upon any claim for any loss or damage under this policy unless brought after the amount of such loss or damage shall have been fixed and rendered certain, either by final judgment against the assured after trial of the issue or by agreement between the parties with the written consent of the company, nor in any event unless brought within two years after such final judgment or agreement.

SETTLEMENT OF CLAIMS

VII. The company reserves the right to settle any claim or suit. The assured shall not interfere in any negotiations or legal proceedings conducted by the company on account of any claim.

The company is not responsible for any settlements made nor for any expense incurred by the assured unless such settlements or expenditures are first specifically authorized in writing by the company, except that the assured may provide at the time of the accident, at the expense of the company, such immediate surgical relief as is imperative.

SUBROGATION

VIII. In case of payment or loss and/or expense under this policy, the company shall be subrogated to all rights of the assured to the extent of such payment, and the assured shall execute all requisite papers and shall cooperate with the company to secure to the company its rights.

OTHER INSURANCE

IX. If the named assured carry any other insurance covering concurrently a claim covered by this policy, the assured shall not recover from the company a larger proportion of any such claim than the sum hereby insured bears to the whole amount of valid and collectible concurrent insurance.

INSPECTION

X. The company shall be permitted, at all reasonable times during the policy period, to inspect any of the Aircraft described within.

CANCELLATION

XI. This policy shall be canceled at any time at the request of the assured, in which case the company shall, on demand and surrender of this policy, refund the excess of paid premium above the customary short rate premium for the expired term. This policy may be canceled at any time by the company by giving to the assured a five (5) days' written notice of cancellation with or without tender of the excess of paid premium above the pro rata premium for the expired term, which excess, if not tendered, shall be refunded on demand. Notice of cancellation shall state that said excess premium (if not tendered) will be refunded on demand. Notice of cancellation mailed to the address of the assured stated in this policy shall be a sufficient notice.

ASSIGNMENT

XII. No assignment or change of interest under this policy shall bind the company unless there shall be endorsed hereon the acceptance of the assignee and the consent of the company signed by the President or a Vice-President, and the Secretary or an Assistant Secretary of the company.

CHANGES

XIII. An agent or manager has no authority to change this policy or to waive any of its provisions, nor shall notice to any agent or any manager or knowledge of his or any other person be held to effect a waiver or change this contract or any part of it. No change whatever in this policy, and no waiver of its provisions, shall be valid unless an endorsement be added hereto, signed by a President or a Vice-President, and the Secretary or an Assistant Secretary of the company, expressing such change or waiver. In any matter relating to this insurance no person, unless duly authorized in writing, shall be deemed an agent or manager for the company.

SAMPLE COPY

Form L-1215
(Specimen)

Combined Schedule of Declarations and Coverages

SCHEDULE OF DECLARATIONS

Item

1. Name of Assured.....

2. Assured is.....
(State whether individual, copartnership, corporation, receiver or trustee)

3. Address of Assured.....

4. Address of Home Airport from which Aircraft will be principally operated.....

5. Assured's business or profession is.....

6. Assured's interest in the Aircraft described in the Schedule of Coverages is that of

7. This policy covers only while the Aircraft is (are) used for the following purpose (s)

8. The following pilot(s) only is (are) approved to operate the within-described Aircraft

9. Geographical limits (this policy covers such legal liabilities as are noted in the Schedule of Coverages only while the Aircraft is (are) confined within the following limits)

10. The policy period shall be from the.....day of....., 19....., to the.....day of....., 19....., beginning and ending at.....standard time.

11. The risk was insured during the past year in.....
(Name of company or association carrying risk)

12. No company or association has at any time canceled or refused to renew similar insurance of assured, except as follows:.....
(If any exceptions, state when and why and by what company or association)

13. Special Conditions and Warranties: 1. If the base of operation or nature of operation is changed, immediate notice thereof must be given the Aviation Managers of the company in writing.

2.

SCHEDULE OF COVERAGES

Line	Particulars of Aircraft					Limits of Liability and Premium Charge				
	Depart- ment of Commerce License Number	Make and Model of Aircraft	Mfgr's Serial Number of Aircraft	Passenger Carrying Capacity Excluding Crew	Make of Engine and Serial Number	Clause A		Clause B	Clause C	Total Premium each Aircraft
						Legal Liability for Bodily Injuries to or Death of Public		Legal Liability for Injuries to or Death of Passengers	Legal Liability for Damage to Property of Others	
						One Person	One Accident	One Person	One Accident	
Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	Col. 10	Col. 11
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Total Premiums \$.....

Countersigned at....., this.....day of....., 193.....

UNITED STATES AVIATION UNDERWRITERS, INCORPORATED

By.....
Aviation Managers of the Company.

Short Rate Cancellation Table

FOR TERM OF ONE YEAR

Policy in Force	Per Cent. of Annual Prem.
1 day	2%
2 days	4%
3 days	5%
4 days	6%
5 days	7%
6 days	8%
7 days	9%
8 days	9%
9 days	10%
10 days	10%
11 days	11%
12 days	12%
13 days	13%
14 days	13%
15 days	14%
16 days	14%
17 days	15%
18 days	16%
19 days	16%
20 days	17%
25 days	19%
30 days	20%
35 days	23%
40 days	26%
45 days	27%
50 days	28%
55 days	29%
60 days	30%
65 days	33%
70 days	36%
75 days	37%
80 days	38%
85 days	39%
90 days or 3 months	40%
105 days	45%
120 days or 4 months	50%
135 days	55%
150 days or 5 months	60%
165 days	65%
180 days or 6 months	70%
195 days	73%
210 days or 7 months	75%
225 days	78%
240 days or 8 months	80%
255 days	83%
270 days or 9 months	85%
285 days	88%
300 days or 10 months	90%
315 days	93%
330 days or 11 months	95%
360 days or 12 months	100%

SPECIMEN LIABILITY POLICY

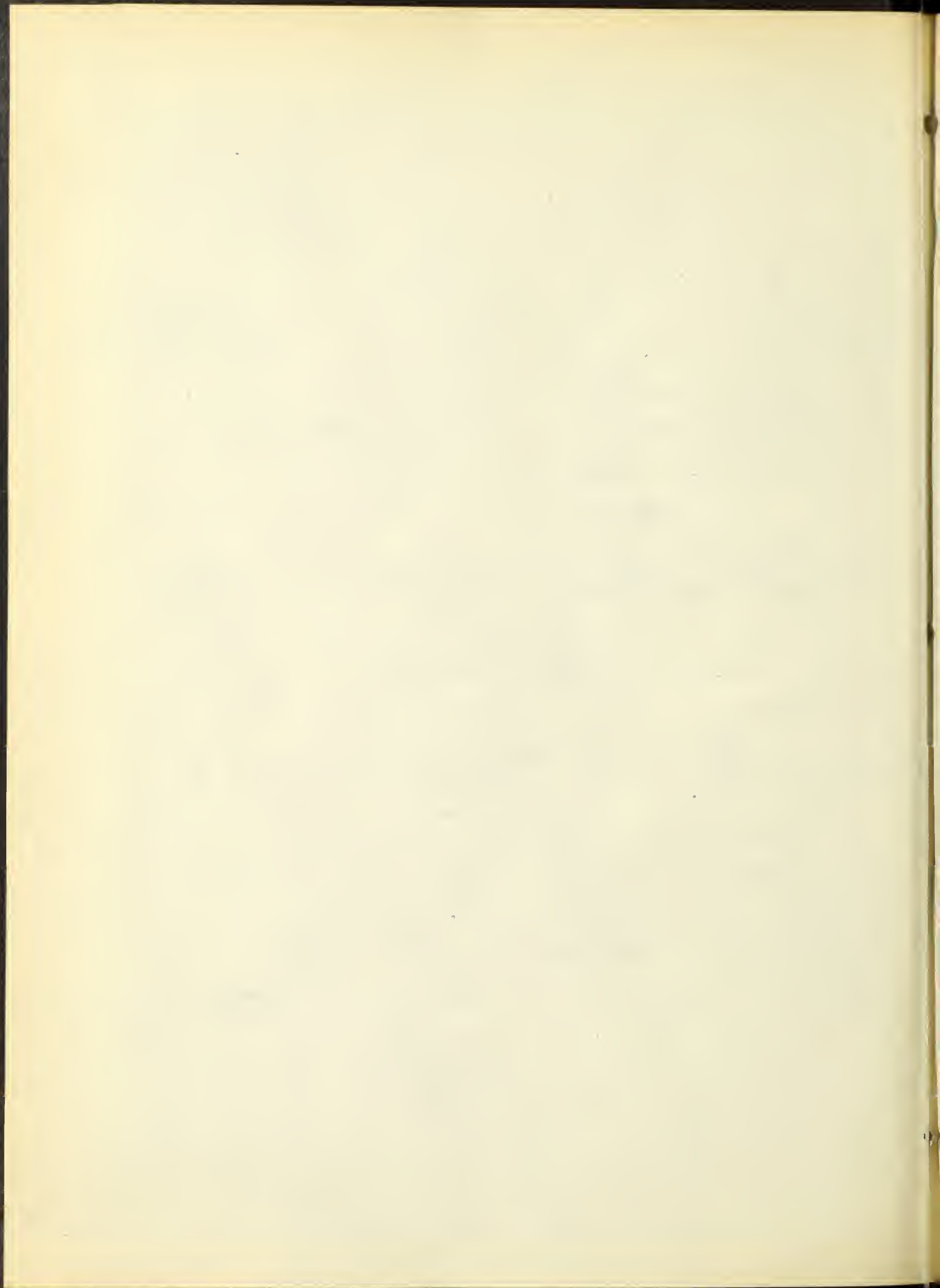


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During the past few years many aviation passenger death and injury cases have been settled out of court. Very few cases have been tried. As a result, the responsibility of the operator of aircraft to his passengers has been vague and indefinite. The operator has considered the liability as negligible, and the underwriter has visualized eventual large jury verdicts. The manner in which the courts have dealt with two cases resulting from two aircrafts accidents is, therefore, of particular interest in illustrating the possible extent of liability. The two cases are as follows:

(a) On March 17th, 1929, a trimotored aircraft owned by the Colonial Western Airways, Inc., engaged, not in scheduled air line operation but in sightseeing flights, crashed shortly after leaving the Municipal Airport at Newark, killing 14 persons. The pilot alone survived. Suits aggregating \$600,000 on behalf of the estates of 6 of those killed were recently tried before a jury in the New Jersey Supreme Court in Newark. The jury, on April 9th, 1931, after a trial lasting nearly 3 weeks, awarded verdicts on behalf of these 6 passengers aggregating \$89,000. The awards ranged from a minimum of \$7500 to a maximum of \$46,000.

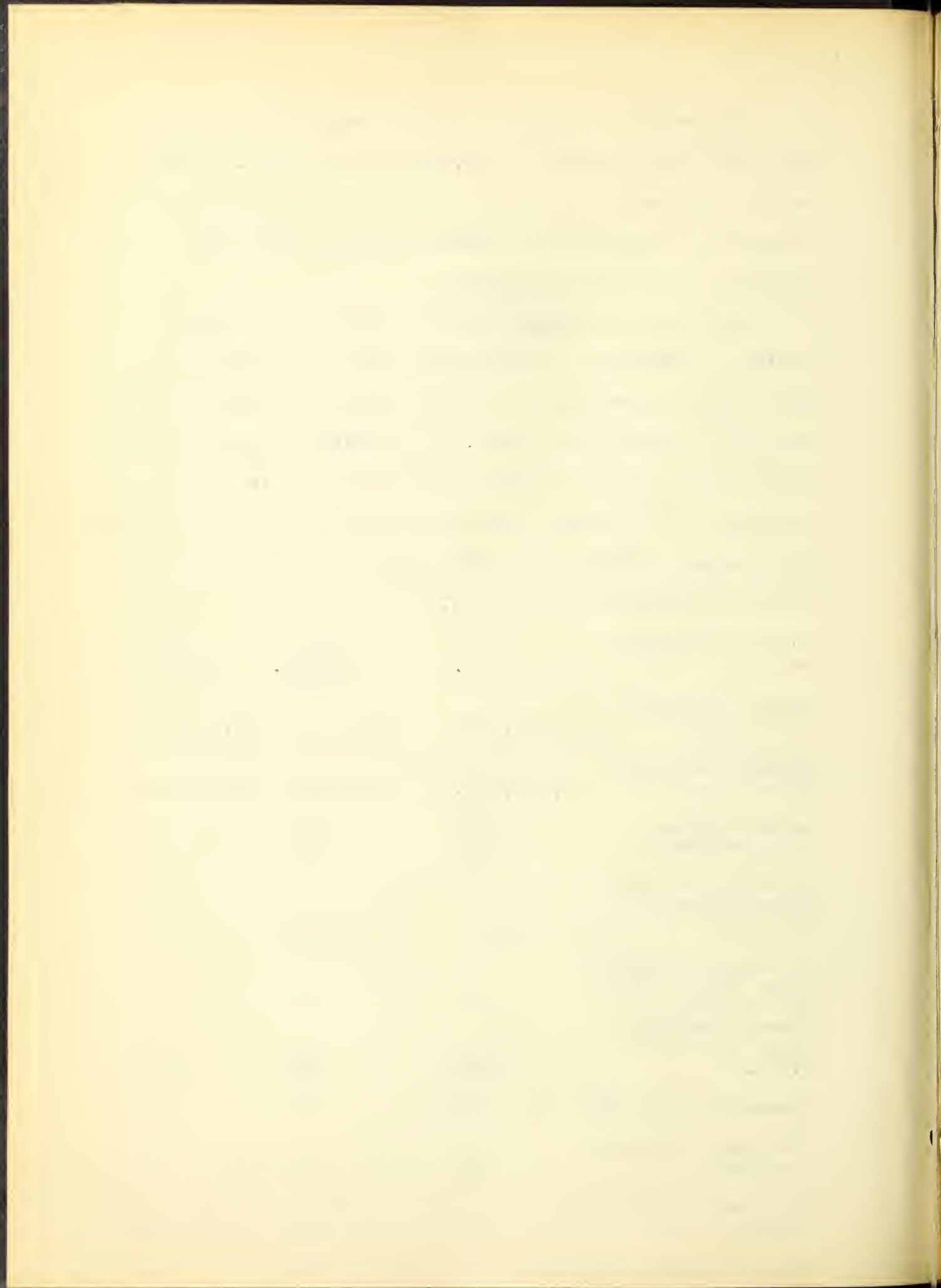
(b) During June 1929 a trimotored aircraft owned by the Northwest Airways, Inc., collided with a bluff after taking off the St. Paul Airport, enroute to Minneapolis, injuring 5 passengers and killing the pilot. Two of the five passenger cases were tried in a Federal Court at St. Paul, and an award of \$65,000 in damages was allowed. Other cases arising out of this accident were settled out of court for an amount reported to have totalled an additional \$32,000.



The awards on behalf of these 8 passengers totalled \$154,000 or an average of \$19,250 per passenger. These cases illustrate the extent of liability which may be imposed upon operators of aircraft and the need for liability insurance protection.

The following table indicates not only the rapid growth of passenger traffic during the past three years, but the extensive increase in the number of miles flown by American scheduled air lines. The table is compiled from information secured from the Aeronautics Branch of the Department of Commerce, the Aeronautical Chamber of Commerce, and the March 1931 Statistical issue of Aviation, covering scheduled transport operations.

	<u>1928</u>	<u>1929</u>	<u>1930</u>
Number passengers carried	52,934.	173,405.	417,505
Number airplane miles flown	10,673,450	25,141,499	36,945,203
Number passenger miles flown	13,127,632.	43,004,440	103,747,249
Number aircraft in operation	294	615	490
Estimated average miles flown per aircraft	36,304	40,616	75,398
Estimated average hours flown per aircraft (at an average cruising speed of 100 M.P.H.)	363	406	753
Passenger fatalities	13	18	24
Passenger Injuries (serious)	1	15	1
Passenger Injuries (minor)	7	11	24
Total Passenger accidents	21	44	50



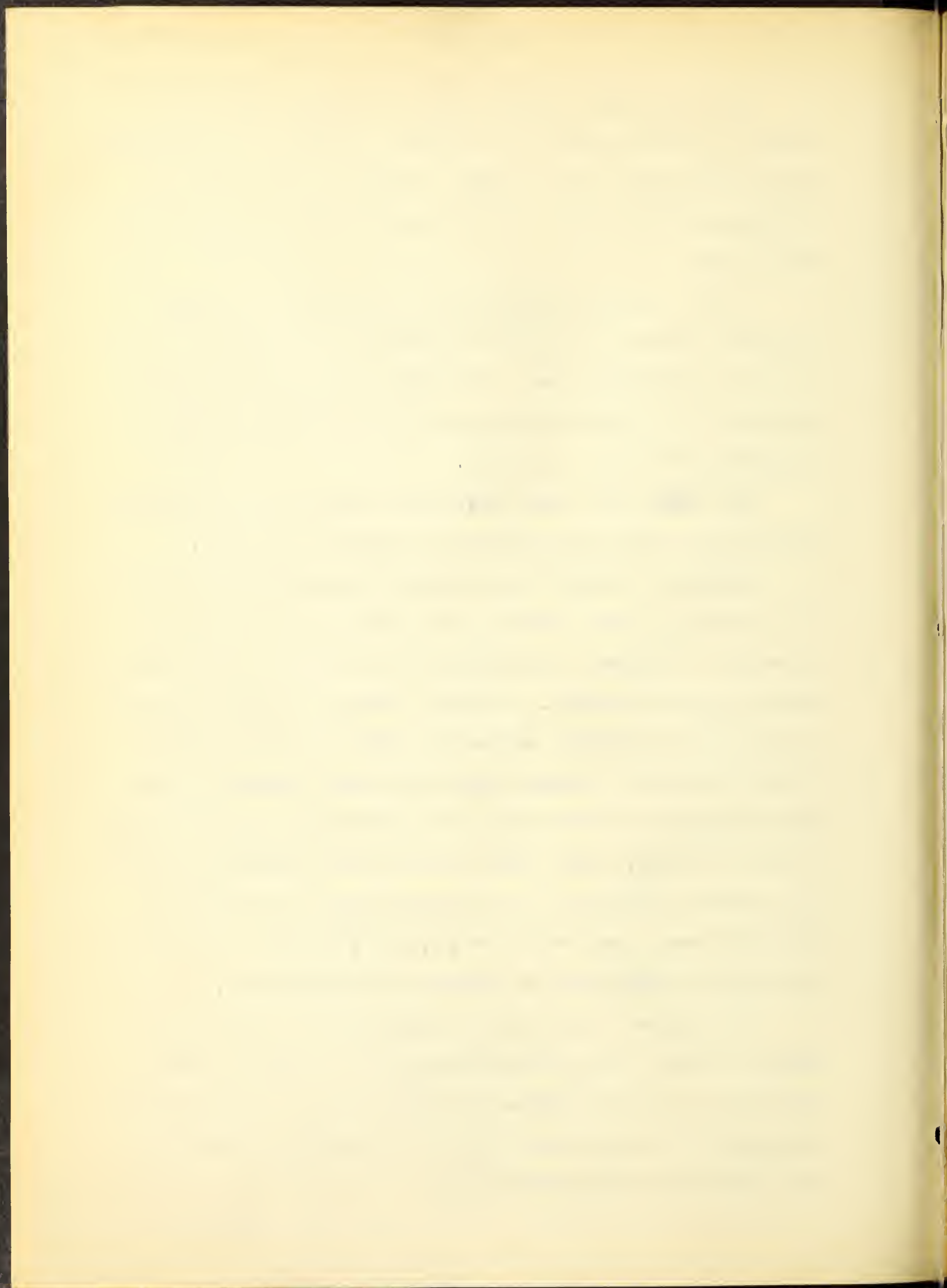
An interesting feature which is brought out in the table is the increase in the number of miles or hours flown during the year by the average transport plane which is attributable to better aircraft, maintenance, and operating facilities.

It will further be observed that while the average transport aircraft in 1930 flew twice as many miles or hours as in the preceding year, the number of aircraft in actual operation has been decreased, in spite of the increased schedules now being conducted.

The table also shows passenger fatalities and injuries during the three year period on scheduled air lines.

American aircraft operators and underwriters do not have the benefit of laws limiting the liability of an aircraft operator in respect to passenger liability as is the case in many foreign countries. Germany, Austria, Brazil, Denmark, France, Great Britain, Australia, Union of South Africa, Italy, Luxemburg, Poland, Switzerland and Jugo-Slavia are parties to the International Air Convention signed at Warsaw October 12, 1929, under which the operators maximum liability for death or injuries to any one passenger is limited to 125,000 francs, equivalent to £1,000 or \$5,000, and then only in event of negligence on the part of the carrier.

The aircraft industry and underwriters realize that high insurance rates retard the growth of aviation and, therefore, their interests are identical in reducing claims, which will in turn reduce rates and stimulate business for both operators and underwriters.



B. Personnel and Individuals

The liability insurance companies will provide protection to the personnel of aircraft and airline companies as it does to other industries. The difference being in the classification of employees as "flying" and "non-flying", and different rates depending upon the degree of hazard to which the employees are exposed. Workmen's compensation insurance is included in this group. Companies writing this class of insurance depend upon their experience in underwriting employees of other industries for determining rates and limitations.

Personal accident insurance is also available to passengers and pilots. One of the first thoughts of the air traveller when anticipating a flight is insurance. Until recently only policies covering travellers on scheduled air transport lines were available, but now an accident policy may be obtained which does not limit the privileges of the insured. This type of policy insures only while the assured is participating in aeronautics. Pilots, co-pilots, flying mechanics, aircraft owners, salesmen and other flying personnel are insurable subject to normal underwriting practices. Pilots must have had at least 400 hours of flying experience to be insurable, and commercial pilots must hold at least a transport license. Co-pilots, flying mechanics, stewards and other flying personnel take the same rates as the pilots with whom they are flying, proportionately amended by the amount of flying contemplated.

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The aviation accident policy is a personal accident contract covering the hazards of aviation alone. The provision is divided into principal sum, including death and a dismemberment feature, and disability providing weekly indemnity. A 26 week period is standard for aircraft accident policies.

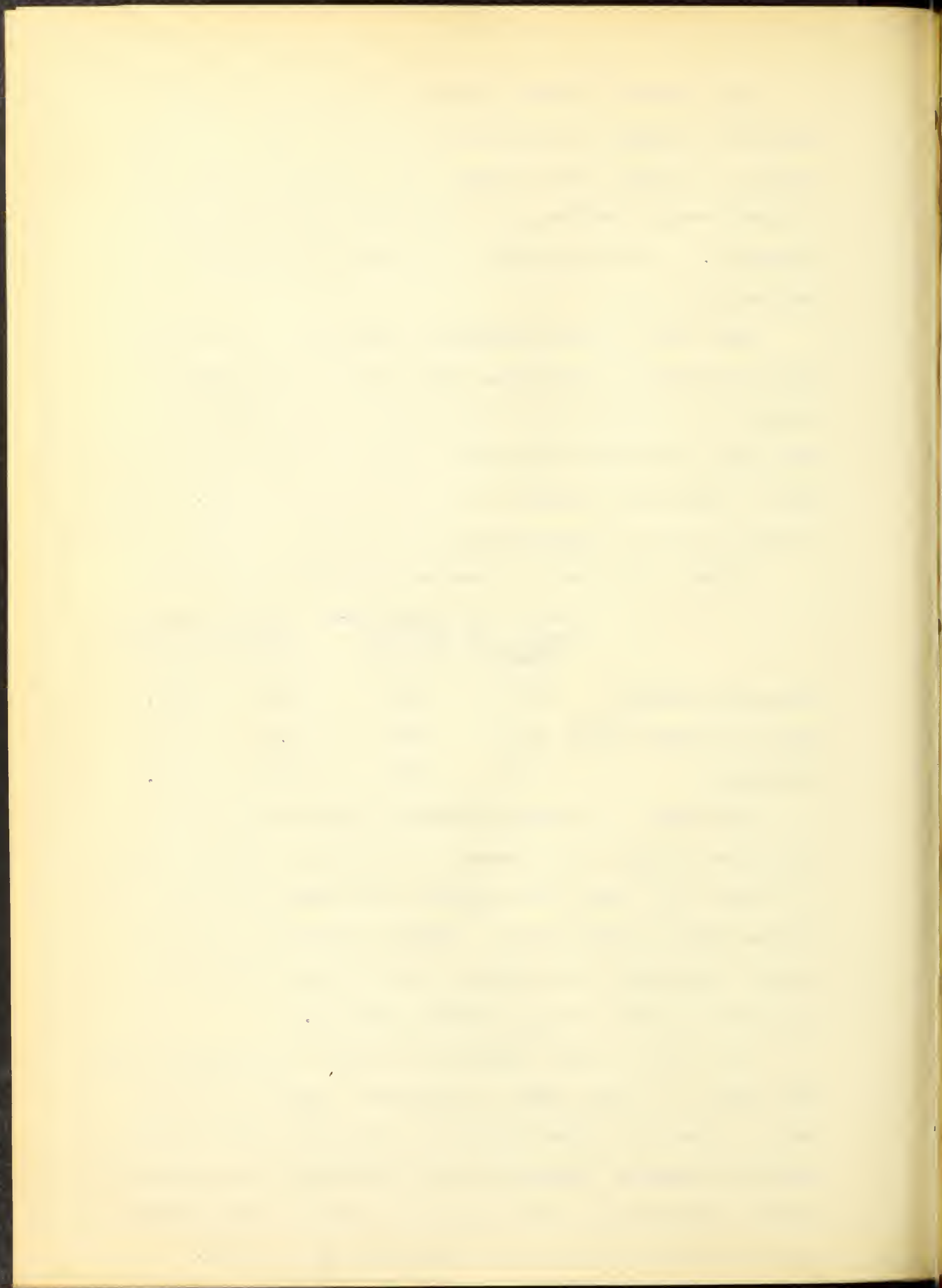
Each risk must be considered separately, as in other lines of aircraft insurance, since the kind and amount of flying the individual will do, as well as the planes he will use, the terrain over which he will fly and other conditions have an important bearing on the rate to be charged. Premiums are per \$1,000 of principal sum and per \$5 of weekly indemnity.

Average rates for the personal accident policy follow.

	Death and Dismemberment (per \$1,000)		Weekly Indemnity (per \$5 a week)	
	Minimum	Maximum	Minimum	Maximum
Commercial Pilots	\$12	\$30	\$4.50	\$11.
Non-commercial pilots	\$10	\$20	\$3.50	\$ 7.
Passengers	\$ 4	\$20	\$1.50	\$ 7.

The amount of personal accident insurance on each individual is kept low because of the rather limited spread. If limits were large the liability in a single aircraft would become highly concentrated. Flights involving racing, endurance contests, acrobatics or stunt flying will not be considered by the average insuring company.

The rates for this personal coverage are dependent upon the amount of flying time, or exposure, involved in each case. Commercial pilots with the most flying time pay the largest premiums. Passengers pay according to the amount of flying contemplated. This basis for rates is the logical one and is fair to both the company and the assured.



C. Airports and Hangars

Claims which have arisen out of the operation, ownership, maintenance and use of airports, has convinced airport operators and liability companies that airport insurance is necessary. It is a type of risk that does not develop a great many claims but when there is an accident, there is an opportunity for it to be a serious one. Airport insurance is one of the newest forms of insurance offered to the aviation industry. Experience with it has been very limited. A few cases will be sighted here to illustrate its application.

- (a) In making some repairs and improvements to the landing area of an airport, it was necessary to dig a hole some three feet deep in the field. A visiting plane landed at the field and in taxi-ing ran into the hole, throwing the craft onto its nose. The speed of the craft was very slow at the time of the accident resulting in only a damaged propeller and some other minor repairs. This accident might well have happened when the plane first landed, while it was travelling at a high speed, causing serious or fatal injuries to the occupants of the plane as well as any spectators at the field.
- (b) A large sun umbrella was located near the loading chute of one of the passenger lines that was operating from the airport. After the passenger plane had loaded, it started to turn around and taxi into the runway for the takeoff. The blast from the propeller picked up the umbrella from its

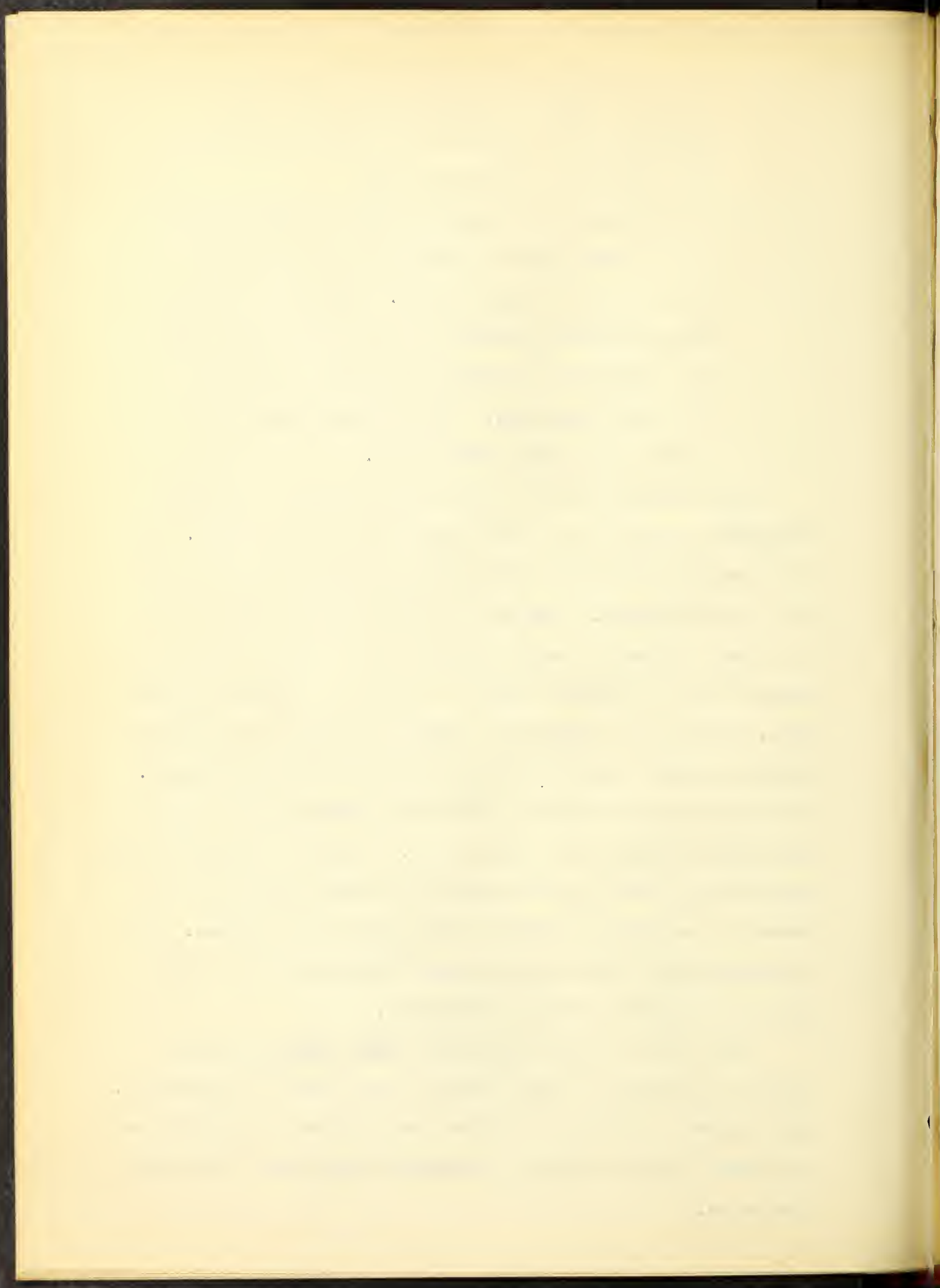


stand and blew it against the fence where a spectator was standing. The spectator's leg was cut and his clothing torn.

- (c) An employee of an airport left a mowing machine at the spot where he happened to be at the conclusion of a day's work. The grass cutter, being partially hidden in the uncut grass, was not observed by a pilot arriving at the port for the first time. The landing plane was almost completely demolished.

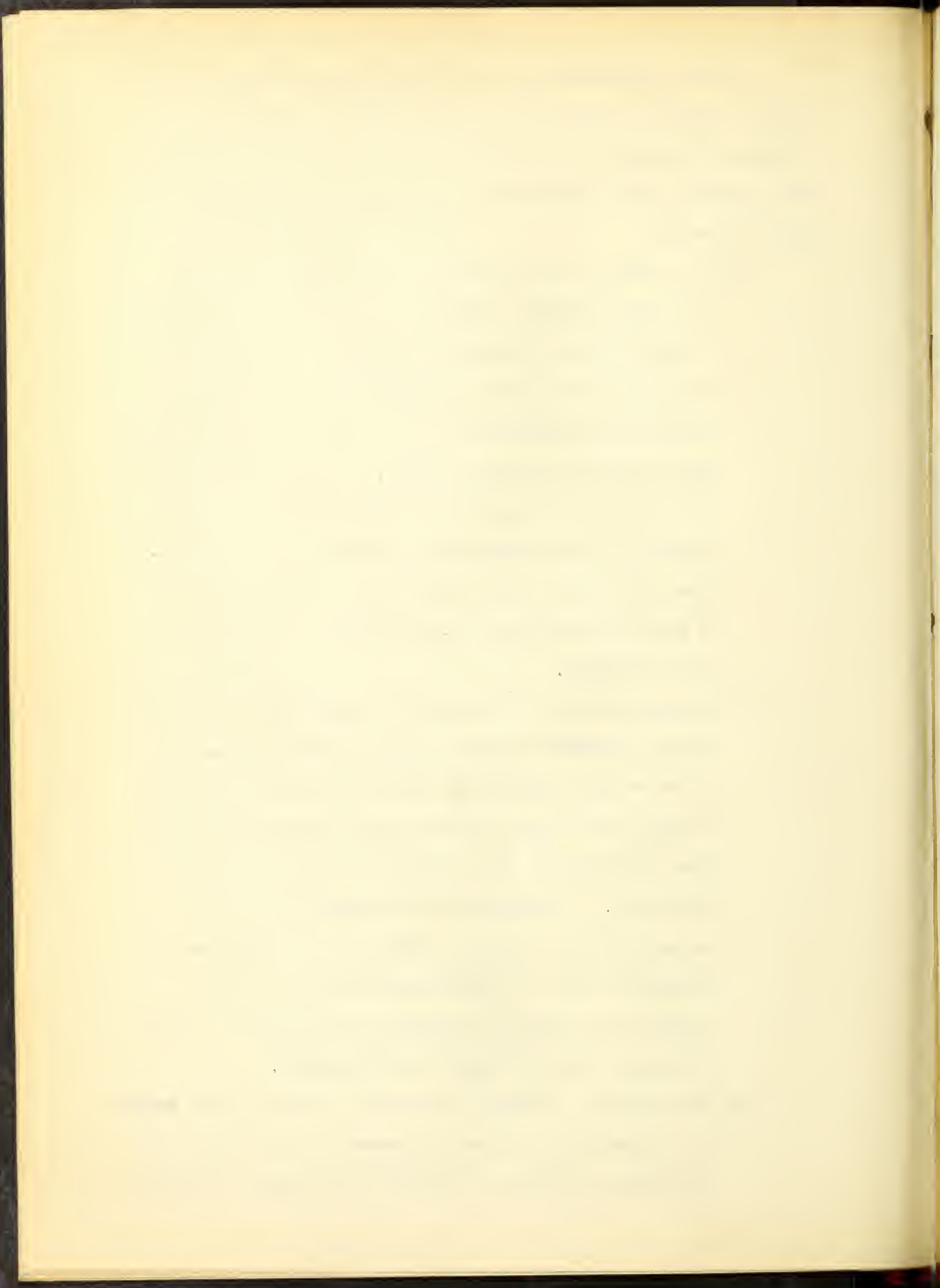
These examples show a great possibility of serious accidents arising out of the operation of an airport. All of these accidents could have been avoided if greater care had been exercised. The hole in the landing area should have been covered in such a manner that a plane could have passed over it without danger. As for the mowing machine case, there is no excuse for leaving a mower on an airport where it might interfere with the safe landing of planes. It is such carelessness as this that endangers the lives of passengers, pilots, and the public. Airport regulations and supervision should be so rigid as to make negligible the number of accidents resulting from such carelessness. But as long as such cases arise airport operators will find a need for airport liability insurance.

The rates for this protection vary with different airports according to the plan and facilities in operation. The amount of traffic, the size, maintenance and upkeep are important considerations in underwriting airport liability insurance.



Another comparatively new form of protection covers hangar owner's liability for fire damage to aircraft and engines the property of others, while in their custody. The need for such protection arises from cases similar to the following:

- (a) The owner of an aircraft, on a trip away from his home airport, lands at the nearest available airport where service and storage facilities are provided. He turns his aircraft over to the local servicing organization to be cared for over night, and filled with gas and oil. When he returns to the airport the next morning he finds the burnt remains of his aircraft in front of the hangar. The plane took fire while being refueled because a smoking spectator was permitted too close to the aircraft.
- (b) Another owner of an aircraft desired to have his engine checked by the engine manufacturer. He flew to the airport on which the manufacturer was located and after giving brief instructions left the aircraft in the custody of the maker and departed. A mechanic in the employ of the manufacturer, without waiting for the engine to properly cool, or disconnecting the battery, started to clean the engine with gasoline. The aircraft took fire and was destroyed.
- (c) The hangar, in which an owner of an aircraft stored his plane, and for which space he paid rent, was destroyed by fire, including the planes stored in



it. The fire was caused by negligent conduct of the hangar owner's staff, other tenants, or spectators.

Here, again, insurance is needed to pay the costs of carelessness. The aircraft servicing company, if not held responsible and made to pay the full damages, will at least be placed to considerable difficulty in defending the suits which may be brought.

If the aircraft are not insured against fire by the owners, they may bring suit. If the aircraft are insured against fire, the insurance company paying the claim will probably take subrogation against the servicing organization.

Rates vary according to the service performed by the insured. If storing only is provided at the hangar, rates will be lower than if repair work is performed. Insurance will cover while planes are parked in front of the assured's hangar in the usual parking space, including the starting and running of engines for the purpose of testing motors and engine instruments, but will not cover during flight or during taxi-ing. Taxi-ing from hangar to parking space may be covered by special agreement.

This protection is based not on the maximum number of aircraft the assured may have in his possession at any time, but on the maximum value of the aircraft. The reason for this is that the value for any one aircraft ranges from \$1,000 to \$165,000. The same space may, therefore, house one large expensive aircraft, or a number of low valued planes. The maximum value of any one aircraft is usually limited to \$25,000, unless specifically agreed to the contrary.

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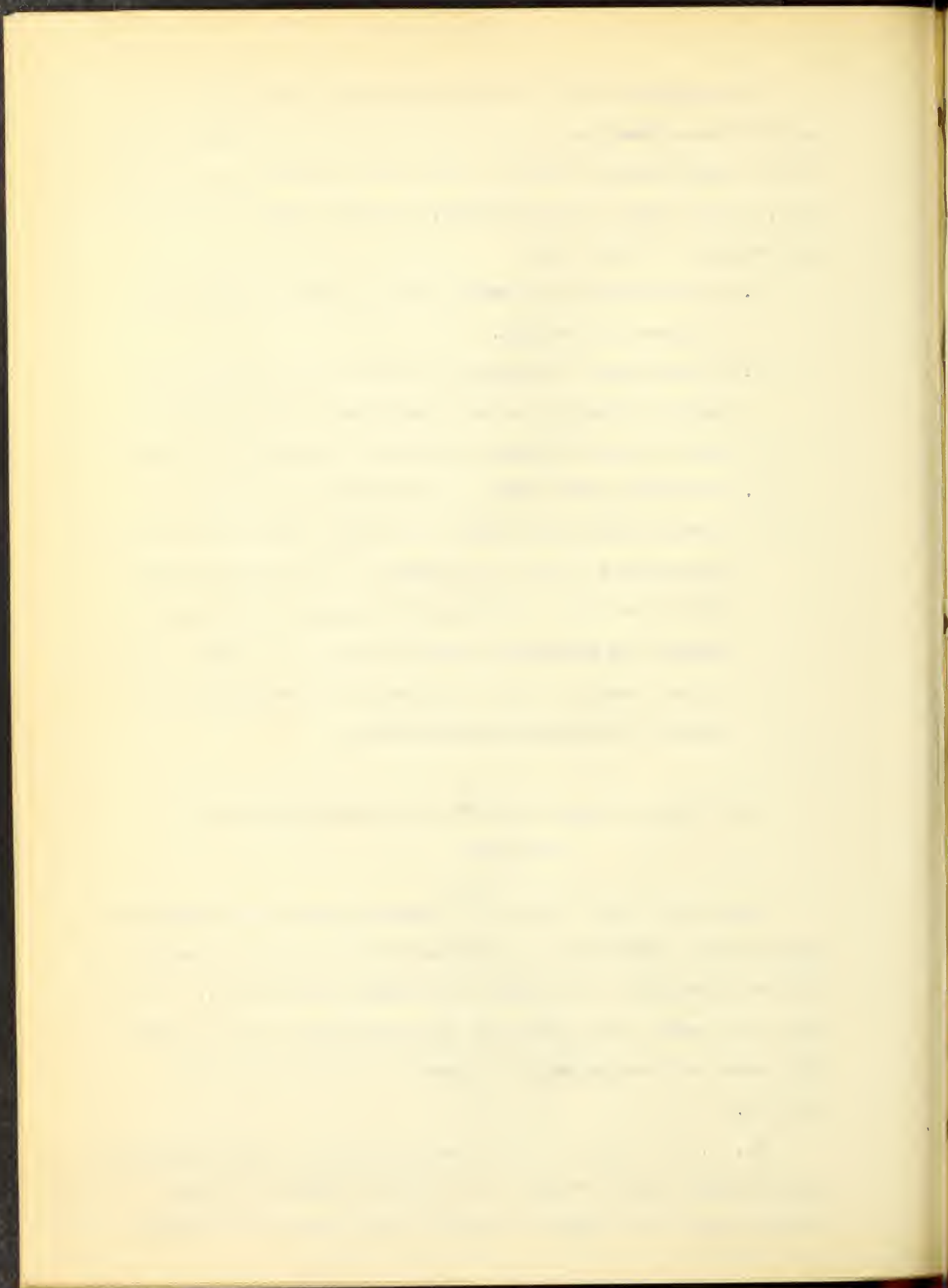
In accepting the insurance the assured warrants that he will issue instructions, similar to the following, to all of his employees and tenants using his premises, and that he will, to the best of his ability, see that these instructions are properly carried out:

1. No fueling of aircraft shall be done in any hangar or place of housing.
2. No starting, attempting to start or running of any engine installed or not installed in any aircraft, shall be done within the hangar or place of housing.
3. No welding work shall be permitted on fabric-covered aircraft within the hangar unless the aircraft in question is at the entrance of the hangar with the tail on a dolly, sufficient personnel are present to remove the aircraft from the hangar to a safe distance in the event of fire, and proper fire-fighting apparatus is immediately available.

D. Cargo, Cargo Liability and Passenger Baggage Liability

Cargo and cargo liability insurance are being developed by insurance companies in anticipation of a growing demand, as air transportation of freight and express increases. As yet, there has been little call for such insurance but the demand will come as transportation companies develop air liner service.

Mr. T. Park Hay, of the Transcontinental and Western Air Incorporated, says, "There is a definite demand in this country for a fast aerial express service which can speed

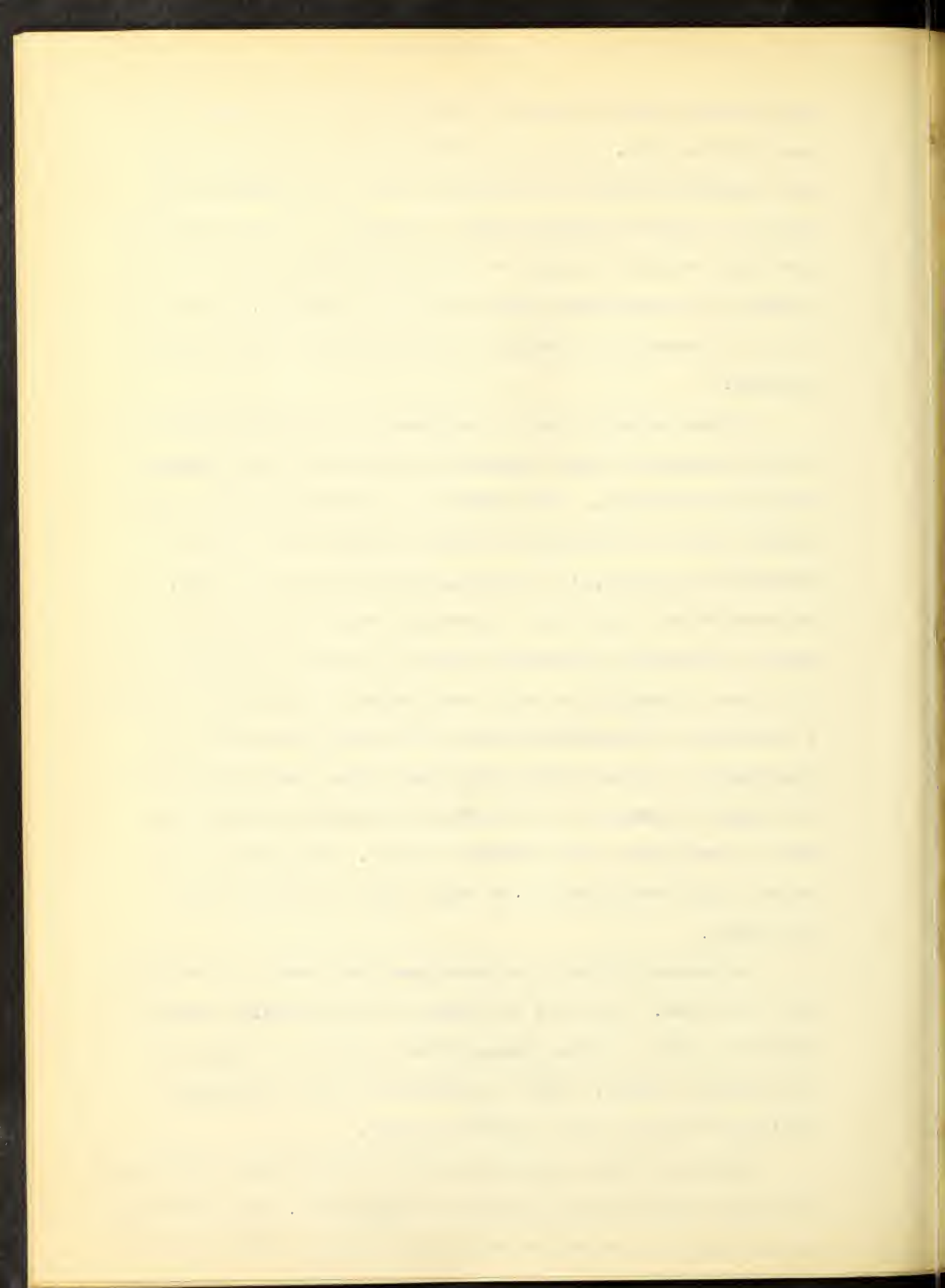


merchandise from one coast to another with the loss of but one business day. All of us subscribe to the belief that any valuable article is absolutely dead and unproductive while in transit between buyer and seller. It is withdrawn from the available stocks of the manufacturer and it is not ready to be bought and paid for by the customer. The longer it is in transit it remains a liability and draws interest charges."

At the present time air cargoes in the United States are limited because of the competition offered by the national railway facilities. This country is not faced with a time barrier such as the English Channel, which was a boon to European air lines, in creating, shortly after the war, an impressive and constantly increasing cargo business requiring special aircraft devoted entirely to transporting merchandise. Air lines operating in South and Central America are carrying a constantly increasing volume of merchandise as well as passengers, because trips requiring weeks, and even months, by coastal steamers and the limited interior conveyances, are now completed in a few days by air. Shipping by air under these conditions is of real value to shipper and consignee.

As faster aircraft are developed the local air shipping will increase. Material so shipped will probably consist of articles small in size, comparatively light in weight, of considerable value, or of a perishable nature requiring delivery with the least possible delay.

Because of the situation in the United States the demand for cargo insurance at present is negligible. The majority of the air line companies have not developed their plans or



prepared bills of lading and therefore have not reached the point where the matter should be submitted to an insurance company for consideration.

The air line company is not concerned with cargo insurance except as an accomodation to the shipper. It must, however, insure its legal liability in respect to cargo transported. The bill of lading is the contract which the air line makes with the shipper and states the air lines responsibility to the owner. Air lines limit their liability in event of loss or damage due to their negligence to \$50 or \$100 per package. The bill of lading follows the form of the usual ocean steamer bill of lading rather than that of the rail carrier. The air line is not liable for loss due to acts of God and other exceptions deemed necessary and proper.

In considering cargo liability insurance underwriters require to know the particulars concerning the air line company, as well as a copy of the bill of lading used, copy of the freight tariff to all points served, the total limit of liability desired for all packages for any one accident to any one aircraft. Premiums may be assessed on the basis of a charge for each package or at an annual rate based on the maximum liability desired on each aircraft.

Cargo insurance, as contrasted with cargo liability insurance, is sold to the shippers who use the air line service. The larger shippers have their own transportation policies and will have them extended to include air voyages. Placing insurance on individual occasional shipments is a laborious job. Each shipment must be handled individually and dealt with on its merits. Much information

is required for such a transaction. The point of shipment and destination, the nature of the merchandise, and the air line which will carry it must be known, as well as the type of aircraft used by the air line, responsibility of the company, pilot's qualifications, and the usual weather conditions.

Insurance for air voyage only can be secured or protection can be had covering a warehouse to warehouse shipment. If warehouse to warehouse coverage is desired and the connecting conveyances will be rail and truck, the insurance will cover fire, collision and derailment by rail, and fire, collision and overturning by truck.

There have been a few accidents in which the baggage of passengers have been damaged, resulting in a demand for baggage liability insurance covering the legal liability of an aircraft operator for loss or damage to the baggage of passengers, caused by fire or collision of the aircraft with the ground or other object.

This additional coverage is being offered for about \$5 per passenger seat per year, in the form of an endorsement to the hull policy insuring the aircraft, covering the legal liability of the aircraft owner, subject to a limit of \$100., for the personal baggage of any one passenger involved in any one accident arising while the aircraft is in flight.

General

The forms of insurance being offered to the aviation industry by fire and liability companies have been discussed in the preceding section. One of the outstanding features of the aviation insurance industry is the underwriting organization which has been set up. At the present time there are five aviation insurance markets, representing 100 or more fire and casualty companies. Four of the markets represent groups and one represents companies acting individually. For each of the four groups there is a central office and all aviation underwriting for the members of the group is concentrated at that central office. In other words the central office functions as the aviation department of the member companies. For example, the United States Aviation Underwriters, Incorporated, are aviation managers or underwriters for the ten fire insurance companies and the six casualty companies which are members of the group.

The group method of underwriting aircraft is an excellent one. Instead of each company struggling by itself to underwrite the aviation hazards, the efforts of several companies are concentrated and the underwriting is done by a group of individuals who devote their entire time to studying aeronautical insurance. The underwriters are men who are thoroughly familiar with aviation and in many cases are either active pilots or ex-pilots. Their job is to follow closely the progress and development in aeronautics and to study the hazards involved in flying as a pilot or passenger. They must also be familiar with structural and

mechanical improvements.

The insurance rates are uniform for all member companies and an applicant for aviation coverage may choose the company with which he wishes to be insured. The same results could not be achieved if each company attempted to act individually. Life insurance companies might benefit by a similar arrangement in establishing the mortality rates among passengers and pilots.

Insurance on a "flying hour basis" was undertaken some three years ago, but the companies which attempted to issue it have since ceased to write aircraft insurance. With but a few exceptions, coverage on this basis is not only impractical but operates to the disadvantage of the assured, although it appears to some that the ultimate cost would be less. It must apply only to that insurance which protects during flight alone and in those cases it is difficult to predict the amount of flying which will be performed.

A safety campaign is now being made by one of the insurance markets in an attempt to reduce the number of fatalities due to "pilots' errors". The appeal is directed to operators of airlines, airport managers, mechanics and pilots, for cooperation in reducing the number of crashes and fatalities in aviation. If the campaign is successful it will result in promoting the aviation industry and in reducing the costs of aviation insurance.

Gliders are looked upon favorably by both the United States Department of Commerce and the aviation insurance industry. They are considered an excellent way for beginners to familiarize themselves with the behavior of

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aircraft when in flight. The Government says that two classes of gliders are eligible for license:

- (a) Gliders manufactured under Approved Type Certificates. This corresponds to the present procedure of the licensing of airplanes.
- (b) Gliders constructed by anyone provided they are built in accordance with specifications and designs which have been previously approved by the Department of Commerce.

Licensed gliders will be considered for limited forms of insurance by companies writing aviation insurance.

Conclusion

The foregoing study presents a fairly clear picture of the hazards involved in aviation and how insurance companies are meeting the demand for aviation coverage.

The life companies are struggling individually in an attempt to provide life insurance for pilots and passengers of aircraft. Some of them have measured the hazards incorrectly and are quoting premiums without sufficient and accurate knowledge of the aeronautics industry. But they will arrive at the proper basis of underwriting after some years of experience and study. The greatest single factor which would be of assistance to them, at the present time, is cooperation in the accumulation and classification of data for the establishment of accurate tables of mortality among the various branches of the aviation industry. The life companies need to acquire closer contact with aviation by employing the services of men who are active or experienced in aeronautics.

The fire and liability companies seem to be insuring aviation in a more logical way. By means of group underwriting, the efforts of several companies are combined in one organization, which devotes its entire time and energy to the problems of aircraft insurance. Through this group organization they are doing more than underwriting, they are attempting to improve the conditions in aviation, which, in turn, will reduce insurance rates and produce more business.

The rates for all aviation insurance are very high. Even with such high rates few companies have been able to show

a profit from their aircraft insurance, and few expect to earn a profit for some time to come. However, the companies which are writing aircraft insurance deserve a great deal of credit for the pioneering they are doing. They are performing a patriotic and social service with their efforts in promoting aviation. With improvement in the aviation industry will come improvement in the underwriting of aviation insurance.

APPENDIX I

Rating Schedules for Pilots and Passengers

APPENDIX I

SCHEDULE A

Rates for Passengers

No. 1. Fare-paying passengers over established commercial routes, between well-equipped airports, in licensed planes operated by licensed pilots:

- (a) Up to 10 flights a year.....No extra
- (b) 10 to 20 flights a year.....\$5 extra
- (c) 20 to 40 flights a year.....\$10 extra
- (d) Over 40 flights a year.....\$15 to \$25 extra

No. 2. Private owner employing licensed pilot...\$15 to Prohibited

No. 3. Officers and employees of Companies which own or employ airplanes for use in connection with their business, operated by licensed pilots between well-equipped airports only.

Rated as fare-paying passenger (No.1 above)

No. 4. Executives and employees of Airplane Companies. (If not piloting or testing)

Rated as fare-paying passenger (No.1 above)

No. 5. Airport Personnel (If not piloting or testing)

Rated as fare-paying passenger (No.1 above)

No. 6. Passengers flying with unlicensed pilot or in unlicensed plane.

Prohibited

No. 7. Passengers not classified in these rules:

Submit Preliminary application with Aviation Statement.

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SCHEDULE A (Continued)

Rates for Civil Pilots

No. 1. Licensed Pilots flying Licensed Planes:

- (a) In passenger service over established commercial routes between well-equipped airports.....\$15 to \$25
- (b) In mail or express service between well-equipped airports only.....\$25
- (c) In Taxi service.....Prohibited
- (d) Private owner-pilot.....Submit Aviation Statement
- (e) Exhibition, stunt, long distance, endurance, racing, testing, advertising, forest patrolling, photography and news agency work.....Prohibited
- (f) Instructors at Civil Flying Schools...Usually Prohibited

- No. 2. Unlicensed Pilots.....Prohibited
Student Pilots.....Prohibited

Rates for Military and Naval Air Service

No. 1. U. S. Army Air Corps
Naval Flying Service
U. S. Marine Corps Flying Service and Coast Guard
Flying Service:

- (a) Officer pilots.....Prohibited
- (b) Enlisted air pilots.....Prohibited
- (c) Observers and Photographers.....Prohibited
- (d) Officers, not pilots.....Regular to Prohibited
- (e) Enlisted men, not pilots....\$5.00 to Prohibited

NOTE: The rating for classes (d) and (e) will depend upon the amount of flying done, if any.

No. 2. Student Pilots at Government Flying Schools....Prohibited

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SCHEDULE A (Continued)

No. 3. U. S. Army Air Corps Reserve and Naval and Marine
Corps Flying Service Reserves:

- (a) Officer pilots.....\$10 extra
- (b) Observers and Photographers.....\$10 extra
- (c) Officers and Enlisted men who do not fly...No extra

NOTE: The ratings indicated apply only to those whose flying is restricted to the annual fifteen day training school or encampment. These ratings may be increased depending upon the nature and extent of additional flying done.

No. 4. National Guard Air Corps:

- (a) Officer pilots.....\$15 extra
- (b) Observers and Photographers.....\$15 extra
- (c) Officers and Enlisted men who do not fly...No extra

NOTE: The ratings indicated apply only to those whose flying is restricted to the annual encampment and to officially prescribed training. These ratings may be increased depending upon the nature and extent of additional flying done.

LIMITS OF AMOUNT

No case will be accepted if it appears necessary to charge an extra premium greater than \$25 per \$1,000

\$25,000 if extra premium is \$5 per \$1,000
\$20,000 if extra premium is \$10 per \$1,000
\$15,000 if extra premium is \$15 per \$1,000
\$10,000 if extra premium is \$20 to \$25 per \$1,000

Disability and Double Indemnity Benefits will not be granted if an extra premium is charged.

Term insurance will not be issued under these rules.

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SCHEDULE B.

Activities in Aviation

Ratable No Disability or Double Indemnity

The usual basis for classifying these applicants is the number of flights made during the preceding year. If it appears probable that more flights will be taken in the future, the rating should be increased. For instance, if an applicant who has taken twenty-five flights is identifying himself with an aviation company, or if his company is purchasing a plane, it is probable that the number of flights will be increased, hence the rating should also be increased. An applicant's statement that he will decrease or discontinue flying should be discounted, particularly if his aviation activities have interfered with securing insurance in the past.

1. Passengers

Using planes flown by regularly licensed pilots over established routes such as Cleveland-Detroit, Detroit-Grand Rapids, and Chicago-Minneapolis.

Number Flights per year	Minimum Extra Premium
Not more than 6.....	Standard
7-12.....	\$5.00 per M.
13-25.....	\$10.00 per M.
26-50.....	\$15.00 per M.
More than 50.....	\$25.00 per M.

2. Owners. Not Piloting

Number Flights per year	Extra Premium
Not more than 12.....	\$10.00 per M.
13-25.....	\$15.00 per M.
26-50.....	\$20.00 per M.
More than 50.....	\$25.00 per M.

3. Pilots

Aerial photographers.....	\$25.00 per M.
Air Mail.....	\$25.00 per M.
Commercial.....	\$25.00 per M.
Exhibition.....	Decline
Navy and Marine.....	\$25.00 per M.

4. Army Aviation Corps

Cadets and Student Pilots—\$25.00 per M.—Total extra for first year to be collected with first premium regardless of the method of premium payments.

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OTTAWA

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SCHEDULE B (Continued)

Lighter than Air Corps—\$25.00 per M.

Observers.....\$25.00 per M.
Pilots.....\$25.00 per M.

Reserve Corps Pilots flying only 2 weeks a year—\$10.00 per M. total extra for first year to be collected with first premium regardless of the method of premium payments.

All other classes whether on flying pay or not—\$10.00 per M. on life plans—\$7.50 per M. on endowments maturing in 25 years or less.

5. Students

\$25.00 per M. No Disability or Double Indemnity.—Total extra to be collected with first premium regardless of method of premium payments.

SCHEDULE C

12. RATES FOR CIVIL PILOTS

(a) Licensed pilots flying licensed plans

	Extra Premium per M.
(1) Between well equipped airports only, over established commercial routes, passenger service.....	\$15 - \$25.
(2) Between well equipped airports only, over established commercial routes, mail or express pilots or others, not passenger service.....	\$25
(3) Mapping and forest patrol, Government service, part year only.....	\$15
(4) Mapping and forest patrol, private companies.....	\$25
(5) Other aerial photographers, news agency, etc.	\$50
(6) Exhibition, stunt, long distance, endurance, racing, testing, advertising.....	Not accepted
(7) Private owner-pilot.....	Usually not accepted
Select cases (flying ability, mechanic service, habits and moral hazard)	\$20-\$50
(8) Aero Club pilots and instructors.....	\$25
(9) Others, (including taxi service).....	\$25-\$50

(b) Student pilots, unlicensed pilots, and pilots flying unlicensed planes.....Not accepted

1. The first part of the paper is devoted to a general discussion of the problem of the origin of life. It is shown that the problem is one of the most important and most difficult in the history of science.

2. The second part of the paper is devoted to a discussion of the various theories of the origin of life. It is shown that the most plausible theory is that of spontaneous generation.

3. The third part of the paper is devoted to a discussion of the evidence in favor of spontaneous generation. It is shown that the evidence is very strong and conclusive.

4. The fourth part of the paper is devoted to a discussion of the objections to spontaneous generation. It is shown that the objections are not valid.

5. The fifth part of the paper is devoted to a discussion of the implications of the theory of spontaneous generation. It is shown that the theory has important implications for the study of the origin of life.

6. The sixth part of the paper is devoted to a discussion of the history of the theory of spontaneous generation. It is shown that the theory has a long and interesting history.

7. The seventh part of the paper is devoted to a discussion of the future of the theory of spontaneous generation. It is shown that the theory is still a subject of active research.

8. The eighth part of the paper is devoted to a discussion of the conclusions of the paper. It is shown that the theory of spontaneous generation is the most plausible theory of the origin of life.

9. The ninth part of the paper is devoted to a discussion of the bibliography. It is shown that the bibliography is very extensive and covers a wide range of subjects.

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SCHEDULE C (Continued)

13. RATES FOR MILITARY AND NAVAL PILOTS

- (1) Royal Canadian Air Force.....\$20
- (2) Reserve Officers, Royal Canadian Air Force...\$10
- (3) United States Army, Navy and Marine Corps
and Coast Guard, member of Air Corps.....\$30
- (4) United States Air Corps Reserve Officers.....\$15

14. EXTRA PREMIUMS FOR PASSENGERS

- (1) Pleasure rides of less than one hour as fare-paying passenger, infrequent.....No Rating
- (2) Fare-paying passengers, between well equipped airports, over established commercial routes, with licensed planes, a graded scale of extra premium, depending on the number of flights contemplated as follows.
 - Up to 10 flights per year.....No Rating
 - 11 to 20 flights per year.....\$5
 - 21 to 40 flights per year.....\$10
 - Over 40 flights per year.....\$15
- (3) Passengers of a somewhat less favorable type than 14 (2), including passenger members of Aero Clubs not intending to become pilots, a graded scale of extra premium, depending upon the number of flights contemplated, as follows:
 - Up to 5 flights per year.....No Rating
 - 6 to 10 flights per year.....\$5
 - 11 to 20 flights per year.....\$10
 - 21 to 30 flights per year.....\$15
 - 31 to 40 flights per year.....\$20
 - Over 40 flights per year.....\$25
- (4) Officers and employees of companies which either own or employ aeroplanes for use in connection with their business, operated by licensed pilots and operating between well equipped airports only. Schedule same as 14 (2)
- (5) Officers and employees of companies whose planes will be flying over remote and unpopulated territories, the above ratings would be greatly increased, and, in many cases, the risk declined
- (6) Private owner employing licensed pilot.....\$15-\$50
- (7) Passenger, flying with unlicensed pilot or unlicensed plane.....Not accepted

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SCHEDULE D

Conference Rules—Aviation

Class	Extra Prem. per M.
1. Stunt Fliers; non stop record seekers and all the so-called "gypsy" flyers.....	R.N.A.*
2. Aviation officers of the Army and Navy.	
Lieuts. of less than 2 years experience.....	\$50
Lieuts. of more than 2 years experience.....	\$40
Captains.....	\$30
Majors.....	\$20
3. Commercial Fliers-Pilots	
Air-mail Pilots.....	\$50
Commercial Pilots carrying passengers and freight over established routes.....	\$25
4. National Guard Officers attached to Aviation Units.	
Reserve Officers, attending National Guard Encampments, and flying under favorable conditions as National Guard Officers.....	\$25
Reserve Officers not attached to National Guard Units but flying under the same circumstances.....	\$25
Reserve Officers flying under other circumstances treat same as individual who flies his own plane.....	
5. Individuals owning planes and using them for business or pleasure.	
Those who fly their own planes.....	R.N.A.
Those who employ pilots—Depending on merits of case..	\$5-\$25
6. Individuals connected with aeroplane manufacturing, operating or development, who make occasional flights.	
Ratings are given as a general guide to be used in cases where no stunt, tests, or experimental flying is done.	
5 flights or less per year.....	Standard
6 to 9 flights per year.....	\$2.50
10 to 14 flights per year.....	\$5.00
15 to 20 flights per year.....	\$10.00
More than 20 flights per year.....	min.charge 50c per flight

* Risk not accepted.

SCHEDULE E

1. Do you now write aviation contracts? Yes
2. If so, under what conditions and what is your schedule of rates?
 Air transportation

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SCHEDULE E (Continued)

Passengers on regularly established passenger airways with fully licensed pilots.

Up to 5 flights per annum.....	Standard
6-12 flights per annum.....	\$5.00
13-25 flights per annum.....	\$10.00
26-50 flights per annum.....	\$15.00
Over 50 flights per annum.....	\$25.00

Passengers not on licensed passenger airways but with fully licensed pilots

Up to 12 flights per annum.....	\$10.00
13-25 flights per annum.....	\$15.00
Over 25 flights per annum.....	\$25.00

Owners not piloting, employing fully licensed pilots

Up to 12 flights per annum.....	\$10.00
13-25 flights per annum.....	\$15.00
Over 25 flights per annum.....	\$25.00

Owners piloting.....\$10.00

Executives of airplane companies

Up to 12 flights per annum.....	\$10.00
13-25 flights per annum.....	\$15.00
Over 25 flights per annum.....	\$25.00

Mechanics and field employees—Depends upon merits of each case.

Pilots

Aerial Photographers.....	\$25.00
Air Mail.....	25.00
Army, Navy, Marine.....	25.00
Commercial.....	25.00

Exhibition.....Not Accepted

Reserve, Military or Naval

(limited to two weeks annual training).....	\$10.00
Prospective.....	25.00
Students.....	25.00
Test.....	Not Accepted

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1-800-367-8687
1-800-367-8688

SCHEDULE F

Passengers

- I. Passengers as fare-paying passengers, in licensed airplane, operated by licensed pilot, upon a regular airway, between established airports.

	LIMIT	PLAN
Less than 4 flights	Usual limits in best cases. Any	
4-12 flights per year (or one per Mo.)		
	Standard	
13-24 flights per year....	\$50,000	No Term
25-48 flights per year....	\$5 per M. 25,000	No Term
Over 49 flights per year....	\$10 per M. 20,000	No Term
	\$15-\$25 per M. 10,000	No Term

- II. Passengers as fare-paying passengers, in licensed airplane, operated by licensed pilot, NOT upon a regular airway, NOT between established airports, and an occasional pleasure ride of less than one hour as a fare-paying passenger.

Less than 3 flights per year	Usual limits in best cases		Any
3-6 flights per year	Best Cases	Standard	\$25,000. No Term
	Others—	Rated	
7-12 flights per year.....	\$5 per M.	25,000.	No Term
13-24 flights per year.....	\$10 per M	10,000	No Term
25-48 flights per year.....	\$15 per M	5,000	No Term

- III. Private Owner employing Licensed Pilot—Special inquiry about pilot—experience, license, minimum hours flying—500 hours, where plane is serviced, etc. Rating dependent upon amount of flying done in past and future intentions.

Most favorable cases.....	\$5-\$25 per M	\$10,000	No Term
		to	
		\$25,000	

- IV. Officers and employees of companies owning airplane.
Same as Class II

- V. Other passengers will not be considered.

PILOTS

- I. Licensed Transport Pilots
- | | | |
|------------|-------|---------|
| \$25 per M | 5,000 | No Term |
|------------|-------|---------|
- passenger service between established airports
- N.B. under best conditions lower rate may be quoted but not lower than \$15

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SCHEDULE F (Continued)

II. Licensed Transport Pilots

Express and mail service under

best conditions.....\$25 per M. \$2,500 No Term

III. Other types of pilots will not be considered.

NOTE--In cases where our full limit of insurance is issued with no restriction in plan, we shall consider plan II and III Disability and Double Indemnity, but in all other cases Disability will be limited to plan I without Double Indemnity.

SCHEDULE G

PASSENGERS ON AEROPLANES

A. From four to six flights per annum,—no extra premium, the amount of insurance to depend on the circumstances, with maximum of \$50,000 but with Disability and Double Indemnity Benefits for \$25,000 only. If not more than three flights per annum ignore for reasonable amounts, but use caution for large amounts.

B. More than six, but not more than twelve flights,—an extra premium of \$5, with a maximum amount of insurance of \$25,000 with Disability Benefit Aviation Restriction Clause, but without Double Indemnity Benefits, except under very favorable circumstances. If there is a likelihood that the number of flights will increase or that the applicant will later have a plane of his own, a less liberal treatment should apply both as to extra premium and as to amount of insurance.

C. More than twelve but not more than twenty-four flights, an extra premium of \$10, with a maximum of \$15,000, without the Double Indemnity benefits, but with the Disability Benefit Aviation Restriction Clause.

D. More than twenty-four flights,—an extra premium of \$20, with a maximum of \$10,000 without Disability or Double Indemnity Benefits.

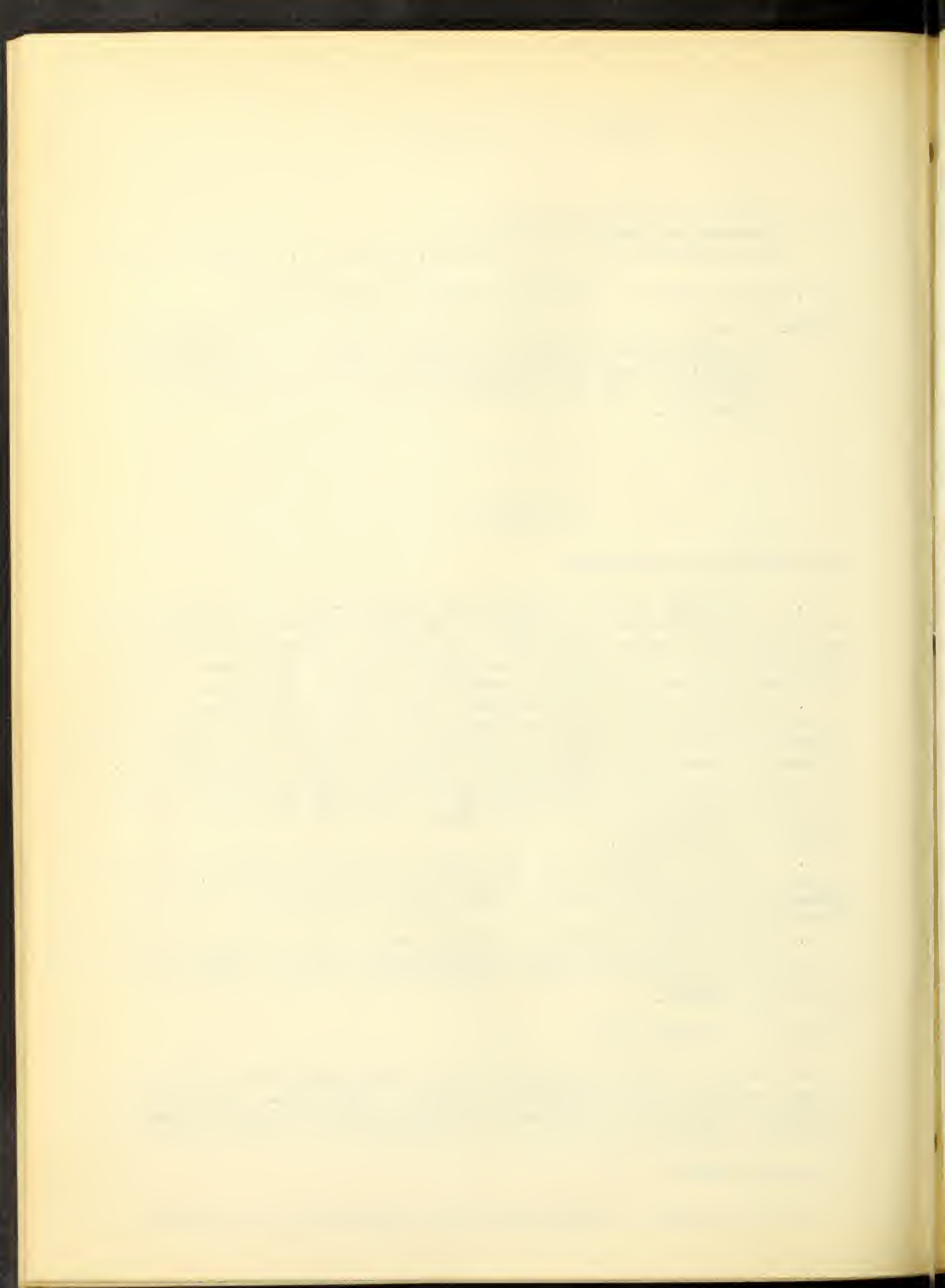
It is understood that the flights are to be made with duly licensed pilots.

APPLICANT OWNING PLANE

E. Where an applicant has his own plane and has a licensed pilot, he is to be treated the same as under "D". The owner of a private plane who operates it himself and has had at least 100 hours flying experience may be considered on the same basis.

LICENSED PILOTS

F. With regard to licensed pilots flying licensed planes



SCHEDULE G (Continued)

carrying passengers over scheduled routes, an extra premium of \$20 per thousand may be charged with a maximum amount of \$5,000, without Disability or Double Indemnity Benefits. Other licensed pilots, including mail or express, should be charged an extra premium of \$25 per thousand, with a maximum of \$2,500.

G. Men who have pilots' licenses but are not engaged in regular pilot work, who take a few flights yearly, handling the plane themselves, will be considered on the same basis as pilots or officers of the National Guard Aviation Organization or the United States Air Corps Reserve, who do not fly regularly, but only during the summer training,—namely, with \$15 per thousand extra premium, with a maximum insurance of \$10,000. The Disability Benefit Aviation Restriction Clause may be granted, but not Double Indemnity. Where they fly regularly they should be treated the same as regular aviators. (See "F".) If a statement is made by members of these organizations that they have not flown for a year and do not intend to fly in the future, and expect to resign from the organization within one year, no extra premium need be charged, but the Aviation Clause and Disability Benefit Aviation Restriction Clause should be placed in the policy, with amount of insurance depending on the condition. In the best type of these cases, policies may be granted without restriction up to \$10,000.

NOTE—The Disability Benefit Aviation Restriction Clause reads as follows: "It is understood and agreed that the Disability Benefits contained in this policy shall not apply if the insured becomes totally and permanently disabled as a result of participation as a passenger or otherwise in aviation or aeronautics."

SCHEDULE H

Aviators

Men who have occasionally flown as passengers
in an airplane.....Standard Rates

Reserve Officers in Aviation Corps, Civilians who own their own
airplanes, but use a licensed pilot, Map Makers and
Photographers.....\$10.00 per M extra

U.S. Mail Pilots and assistants, Operators of privately owned
commercial passenger and mail lines.....\$12.50 per M. extra

Army and Navy Aviators, Commercial Aviators engaged in taking
up passengers for hire only.....\$25.00 per M. extra

SCHEDULE H (Continued)

THE FOLLOWING RISKS ARE NOT ACCEPTED:

Amateurs who own an airplane of their own which they pilot themselves.

Students in an Aviation School, or Aviators who do any trick or stunt flying, or exhibition flying.

Sky Writers, Operators of Motion Picture planes. Testers on newly assembled planes, Unlicensed Pilots.

DISABILITY AND DOUBLE INDEMNITY NOT GRANTED ANY RISKS WHICH ARE RATED ON ACCOUNT OF AVIATION.

SCHEDULE J

Ratings for Aviation Hazard

In all cases where an applicant has flown in the past or intends to fly in the future, there must be submitted with the regular application the special aviation blank, Form P-16, duly completed. When required, this form can be obtained from the nearest Branch Office.

1. Passengers:

Applicants who intend to limit their participation in flying to occasional trips over well-organized air lines, operated on definite schedules between the larger centers by pilots (with transport licenses) may be considered at Standard rates. Attention, however, is drawn to the following points:

- (a) That the air lines must be between larger centers;
- (b) That flights taken are regular scheduled flights; and
- (c) That the number of trips taken be relatively small

If an applicant contemplates taking more than six (6) flights per year, as above, an extra premium will be required, as per schedule below. Passengers using plane service other than as

REIGN OF KING CHARLES THE FIRST

IN WHICH ARE CONTAINED THE
MOST IMPORTANT AND INTERESTING
EVENTS OF HIS REIGN
FROM HIS MARRIAGE TO HIS DEATH
IN THE YEAR 1649

BY JOHN HALLAM

IN TWO VOLUMES
THE FIRST VOLUME

THE SECOND VOLUME

IN TWO VOLUMES
THE SECOND VOLUME

IN TWO VOLUMES
THE SECOND VOLUME

IN TWO VOLUMES
THE SECOND VOLUME

SCHEDULE J (continued)

described above will be treated strictly on the merits of the case.

No. of Flights Per Year Not more than 6	Maximum Limit	Minimum Extra Premium
		Standard with Dis. and A.D.D.
7-10		\$2.50 per M, no Dis. or A.D.D.
11-15		5.00 per M, no Dis. or A.D.D.
16-25		10.00 per M, no Dis. or A.D.D.
26-35		15.00 per M, no Dis. or A.D.D.
36-50	\$10,000	20.00 per M, no Dis. or A.D.D.
Over 50	\$10,000.	25.00 per M, no Dis. or A.D.D.

2. Owners Not Piloting:

But using pilot with transport license under satisfactory conditions.

No. of Flights Per Year Not more than 12	Maximum Limit	Minimum Extra Premium
13-25		\$10.00 per M, no Dis. or A.D.D.
26-50	\$10,000	15.00 per M, no Dis. or A.D.D.
Over 50	\$10,000	20.00 per M, no Dis. or A.D.D.
		25.00 per M, no Dis. or A.D.D.

3. Pilots

Maximum Limit	Minimum Extra Premium Per M No. Dis. or A.D.D.
---------------	---

- (a) Those with transport licenses, employed by well organized passenger air lines, operating on definite schedules between the larger centers, using recognized airports,

\$2,500	1. With at least 2,000 hours piloting experience.....\$25
\$2,000	2. With less than 2,000 hours piloting experience.....\$30

SCHEDULE J (Continued)

- \$2,000 (b) Air Mail.....\$30
- \$2,000 (c) Army, Navy, Marine.....\$40
- \$2,000 (d) Having License as Limited Commercial
Pilots, flying licensed plane, employed
by well organized company.....\$30
- \$2,000 (e) Others having licenses as Limited
Commercial Pilots, flying licensed planes,
but working for companies known to be not
well recognized.....\$50
- \$2,000 (f) Having license as Industrial or Private
pilot, owning and flying licensed plane
under good conditions (with at least 200
hours solo flying experience).....\$50
- \$2,000 (g) Aerial Photographers.....\$50
- \$2,500 (h) National Guard or Reserve Corps Pilots,
flying only two weeks per year under good
conditions (with at least 200 hours' flying
experience).....\$15
- (i) Unlicensed pilots or those using
unlicensed planes.....Declined
- (j) Test or exhibition pilots.....Declined
- (k) Student aviators and persons who expect
to learn to fly.....Declined
- (l) Pilots with less than 200 hours' flying
experience will not be considered.

Executives, mechanics, and field employees of air passenger companies will be considered under passenger rules if not piloting or testing.

Executives, mechanics and field employees of plane construction or plane motor factories, will be considered under the rules most applicable to the conditions under which they may fly.

When the Extra is over \$5.00 per M, Extended Insurance will be eliminated. Larger limits will depend on the merits of the case.

THE UNIVERSITY OF CHICAGO

CHICAGO, ILLINOIS

1900

TO THE PRESIDENT OF THE UNIVERSITY

AND THE FACULTY

OF THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

CHICAGO, ILLINOIS

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THE UNIVERSITY OF CHICAGO

CHICAGO, ILLINOIS

1900

TO THE PRESIDENT OF THE UNIVERSITY

SCHEDULE K

Ratings for Aviation Hazard

Question 9 on the application form, calling for details regarding participation in aeronautics, must be answered in every case. Whenever it appears from such answer that the applicant has flown in the past or intends to fly in the future, there must be submitted with the application, the special aviation blank, form P-113, duly completed.

Aviation risks cannot be considered on the Term plan, nor will either disability or double indemnity benefits be granted.

1. Passengers

Passengers over regularly established passenger air lines operating between airports rated CCC or higher will be considered in accordance with the following schedule:

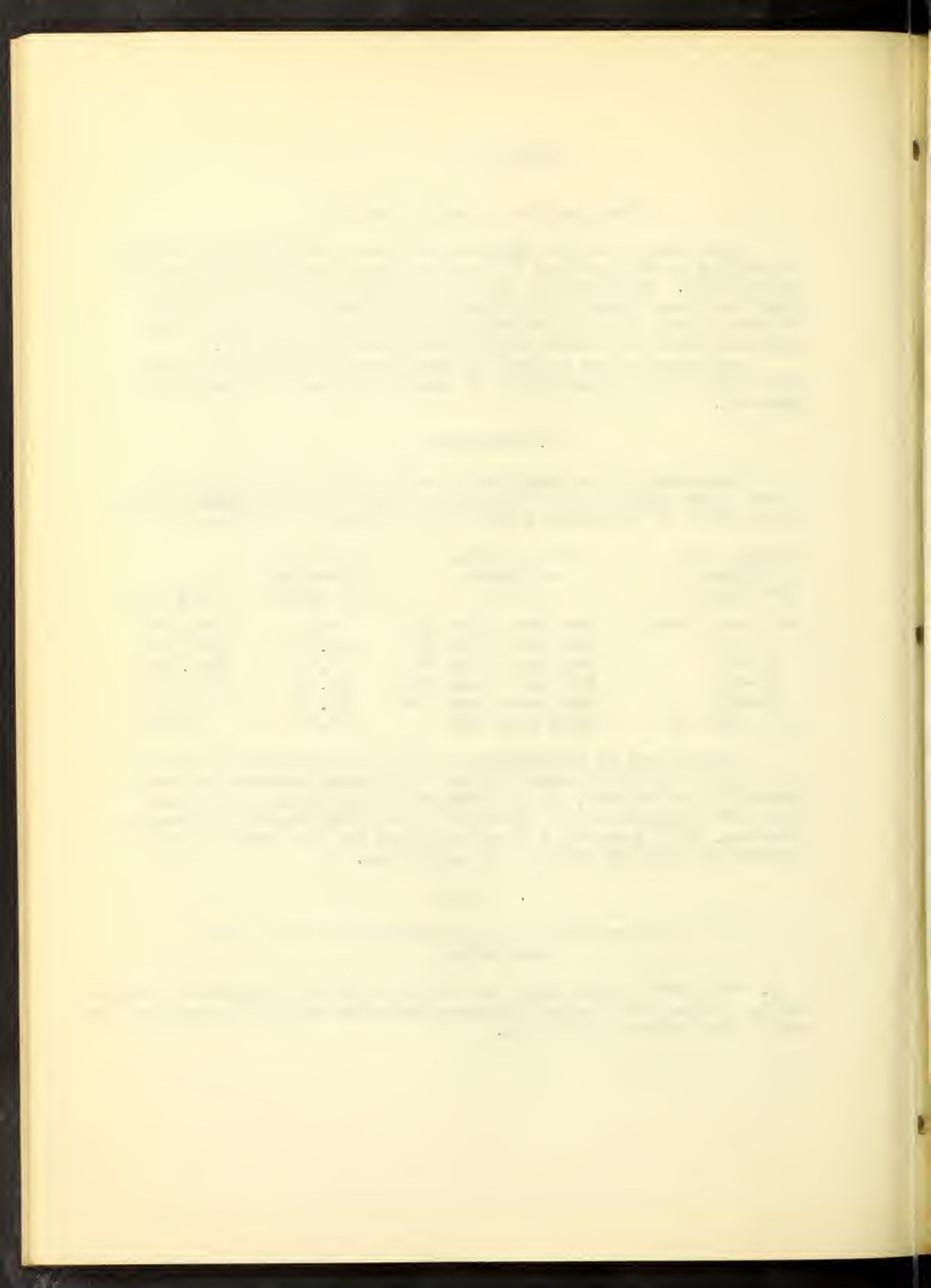
Number of Flights per Year	Total Number of hours in air	Extra Annual Premium per \$1,000	Retention
Not more than 5	Nor more than 15	None	\$25,000
6-10	Nor more than 30	\$5.00	\$20,000
11-20	Nor more than 60	10.00	\$15,000
21-30	Nor more than 90	15.00	\$10,000
31-40	Nor more than 120	20.00	5,000
More than 40	More than 120	25.00	5,000

Executives of companies who fly for business purposes only over regularly established air routes between airports rated CCC or higher, in a licensed plane owned by the respective companies and operated by a pilot having a transport license, will generally be considered at the above rates, depending upon the merits of each case.

2. Pilots

Pilots will be reinsured on the best terms available.

3. The above rules apply to policies with continuous premiums only. Rates for limited payment policies will be furnished for each case upon application.



SCHEDULE L

Aviation Activities

If Rating Over \$10.00 per M, Retention Limit \$2,000.00

1. U. S. AIR CORPS
 - Officer pilots.....R.N.A.....Average Extra
 - Enlisted Air pilots.....R.N.A.....
 - Other personnel.....R.N.A.....
2. NAVAL FLYING SERVICE
 - Officer pilots.....R.N.A.....
 - Enlisted Air Pilots.....R.N.A.....
 - Other personnel.....R.N.A.....
3. U. S. MARINE CORPS FLYING SERVICE
 - Officer pilots.....R.N.A.....
 - Enlisted air pilots.....R.N.A.....
 - Other personnel.....R.N.A.....
4. U. S. GOVERNMENT CIVIL AERONAUTICS (Dept. of Commerce,
Forestry Patrol, Dept. of Agriculture, etc.)
 - Pilots.....R.N.A.....
 - Other air personnel...Special consideration...
5. CIVIL AIR TRANSPORT (Air Mail Routes)
 - Pilots.....Minimum 50c per flight or \$1.00 per
500 miles flown
 - Other air personnel.....same.....
6. CIVIL AIR SERVICE (general)
 - Pilots.....Minimum rate based on 50c per flight
or \$1.00 per 500 miles flown.
 - Other personnel.....same.....
 - Passengers.....same.....
7. AVIATION SCHOOLS
 - Pilot Instructors.....R.N.A.....
 - Students.....R.N.A.....
 - Other air personnel...Special consideration..
8. LIGHTER-THAN-AIRCRAFT (including balloons)
 - Pilots.....No classification
 - Other air personnel.....No classification
9. PROFESSIONAL OR STUNT FLIERS
 - Pilots and passengers....R.N.A.....
10. AIRPORT PERSONNEL
 - Test Pilots.....R.N.A.....
 - Mechanics.....Special consideration...
 - Other employees.....Special consideration...

THE HISTORY OF THE UNITED STATES OF AMERICA

BY JAMES M. SMITH, LL.D., OF THE UNIVERSITY OF CHICAGO

IN TWO VOLUMES. VOL. I.

NEW YORK: THE CENTURY CO., 1895.

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Published by The Century Co., New York.

SCHEDULE L (Continued)

11. AERIAL PHOTOGRAPHY

.....R.N.A.....

12. AIR PASSENGERS

Occasional trips...Less than 5 per year standard.

Frequent trips.....Over 5 per year—minimum 50c
per flight or \$1.00 per 500 miles flown.

SCHEDULE M

No definite rules for Aviation.

Follow ratings of larger companies.

Rates not given.

Individual cases considered on their merits.

All risks accepted.

SCHEDULE O

All aviation risks \$25 added per thousand

SCHEDULE P

Re-insures with other companies

All risks accepted under this condition

SCHEDULE R

Passengers

Not more than 3 flights per year.....Standard

More than 3 flights per year.....\$5.00 to \$10.00 per M.

Pilots

Army, Navy and Marine Corps.....\$25 per M.

Commercial Pilots.....\$50 per M.

SCHEDULE S

Accept fare-paying passengers for occasional flights with no
extra rating, carefully selected risks.

AMERICAN MEDICAL ASSOCIATION

PUBLISHED WEEKLY

CHICAGO, ILL., U.S.A.

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Postmaster: Send address changes to THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, 535 N. Dearborn St., Chicago 10, Ill.

SCHEDULE T

Passengers making infrequent flights--Standard.
Passengers making frequent flights per year from \$2.50 to
\$15 per M.
More than 50 flights per year--Not accepted.

SCHEDULE V

Passengers making less than 5 flights per year--Standard.
Passengers making above 5 flights per year--Rated from \$5
to \$50 per M.

Appendix II

21 Typical Aviation Questionnaires

- 11

EXHIBIT I (Continued)

10. If a Reserve or a National Guard Pilot, when does your term of service expire?
11. When and where did you receive your training as a pilot?
12. Do you give instruction in flying?

I hereby further agree that the above additional statements shall form part of my aforesaid application.

Dated at.....this.....day of.....19....

Witness.....
Signature of Applicant

EXHIBIT II

With reference to my application for Life Insurance dated the.....day of.....19...., I submit the following particulars which I hereby declare to be complete in every respect to the best of my knowledge and belief and that no material information has been withheld or suppressed and I agree that this declaration together with the application shall be the basis of any policy issued to me by theLife Insurance Company.

- (1) My past and present connection with Aviation has been and is as follows:.....
- (2) Number of flights in 1927?.....1928?.....1929?.....
- (3) Hours spent in the air 1927?.....1928?.....1929?.....
- (4) Contemplated flights in 1929?.....
- (5) a Type of aircraft used?.....
b Do you ever pilot planes yourself?.....
c Describe fully route over which flights will be made.....
- (6) State whether the following forms of flying will be done
a Racing?.....
b Testing new aircraft ?.....
c Flying between one hour after sunset and one hour before sunrise?.....
d Flying beyond five miles from shore?.....
- (7) Give full details of any possibility not already covered in the foregoing.....

Dated this.....day of.....19.....
at.....

Signature

1. 凡在本公司工作之员工，其工资之计算，均以实际出勤日数为准。

2. 凡在本公司工作之员工，其工资之计算，均以实际出勤日数为准。

3. 凡在本公司工作之员工，其工资之计算，均以实际出勤日数为准。

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16. 凡在本公司工作之员工，其工资之计算，均以实际出勤日数为准。

17. 凡在本公司工作之员工，其工资之计算，均以实际出勤日数为准。

18. 凡在本公司工作之员工，其工资之计算，均以实际出勤日数为准。

EXHIBIT 3

Gentlemen:

With reference to my application for life insurance, dated the.....day of.....1928, I submit the following particulars which I hereby declare to be complete in every respect to the best of my knowledge and belief, and that no material information has been withheld or suppressed, and I agree that this declaration and the afore-said application shall be the basis of any policy issued to me by.....Life Insurance Company.

1. State approximately the number of flights you have made during the past year.....
2. Approximately how many hours were spent in the air as a result of these flights?.....
3. Were these flights entirely daylight flights?.....
4. Have you ever done any night flying?.....If so, state the number of hours flown between one hour before sunrise and one hour after sunset.....
5. Do you hold a pilot's license?.....
6. Were the aforementioned flights made entirely in commercial planes and piloted by licensed pilots?.....
If not, state exceptions:.....
7. Have you ever been in any accidents, involving damage to craft, pilot or passenger?.....If so, give full particulars.....
8. Do you own, or do you contemplate the purchase of a plane for your own personal use?.....
9. Have you any present intention of qualifying as a pilot?.....
If so, give full details:.....

Dated this.....day of.....19...at.....
.....
Witness Insured

EXHIBIT 4

1. a. How many flights have you taken?.....
b. How many of these were during the past two years?.....
c. How many within the past six months?.....
d. When (approximately) was the last flight?.....
e. Were they taken as passenger, observer or pilot?.....
f. Were they for business or pleasure?.....
g. Were they made in planes flying regularly between established airports over a scheduled air transport route? (if not, give full details).....

1 2 3 4 5 6 7 8 9

1

EXHIBIT 4 (Continued)

2.
 - a. Do you hold a pilot's license?.....
 - b. Have you had, or do you contemplate, any training in operating an aeroplane or airship?.....
 - c. Do you own an aeroplane, or contemplate ownership?.....
3.
 - a. Are you an active or inactive member, or have you ever been such a member of the Government Air Reserve Force, or of any Aeronautical Club? (Give full details).....
 - b. Are you now or have you ever been employed by or connected with a business manufacturing, selling or operating aeroplanes? (If so, state when and in what capacity).....
 - c. Does the business with which you are connected maintain an aeroplane for use of its Officers or employees?.....
4. To what extent do you contemplate making use of an aeroplane and in what capacity?.....

EXHIBIT 5

If an applicant for Life Insurance has taken more than one flight in any type of aircraft or submits an affirmative or indefinite answer to any question in the application concerning aerial flights, kindly have the applicant answer all the following questions and sign this statement.

1. Have you ever owned or operated an aircraft?
2. Give actual dates of last two flights.
3.
 - a. Give number of flights, hours in air and mileage either as passenger or pilot during the last three calendar years.

	No. of flights	No. of hours in air	Mileage
Present year
Past year
Preceding year
 - b. How many flights did you take previous to the dates specified above?.....
 - c. Give total number of flights in planes operated on fare-paying scheduled routes.....in privately owned planes.....in government or state planes.....
Local or sightseeing planes.....
4. Between what two points were your three longest flights made?
5. Were the flights which you made at any time for pleasure, in connection with business or while in government service?
6. Have you a relative or friend who owns or operates an aircraft? If so, state relationship and address.
7.
 - a. Do you hold a commission in the Aviation Section of the Army, Navy or Marine Corps, Officers Reserve or in the National Guard Air Service?

THE UNIVERSITY OF CHICAGO

DEPARTMENT OF CHEMISTRY

1925-26

Under the direction of Professor J. H. E. Spinks, the following students have been admitted to the Department of Chemistry for the year 1925-26:

ADMISSIONS FOR THE YEAR 1925-26

1. *John H. E. Spinks*, Professor of Chemistry, University of Chicago

2. *John H. E. Spinks*, Professor of Chemistry, University of Chicago

3. *John H. E. Spinks*, Professor of Chemistry, University of Chicago

4. *John H. E. Spinks*, Professor of Chemistry, University of Chicago

5. *John H. E. Spinks*, Professor of Chemistry, University of Chicago

6. *John H. E. Spinks*, Professor of Chemistry, University of Chicago

7. *John H. E. Spinks*, Professor of Chemistry, University of Chicago

8. *John H. E. Spinks*, Professor of Chemistry, University of Chicago

9. *John H. E. Spinks*, Professor of Chemistry, University of Chicago

10. *John H. E. Spinks*, Professor of Chemistry, University of Chicago

11. *John H. E. Spinks*, Professor of Chemistry, University of Chicago

12. *John H. E. Spinks*, Professor of Chemistry, University of Chicago

13. *John H. E. Spinks*, Professor of Chemistry, University of Chicago

14. *John H. E. Spinks*, Professor of Chemistry, University of Chicago

15. *John H. E. Spinks*, Professor of Chemistry, University of Chicago

16. *John H. E. Spinks*, Professor of Chemistry, University of Chicago

EXHIBIT 5 (Continued)

- b. When does your Reserve Commission expire?.....
- c. Do you intend to renew it?.....
- d. Have you flown during the past 24 months in connection with your duties as a Reserve Officer?

- 8. Are you connected in any way with Government or State Aviation Units?.....With aeronautical manufacturing, sales or financing?.....With the establishment or maintenance of an airport?.....With an Aero or Flying Club?.....Give details.

- 9. Have you any plans to qualify as a pilot?

- 10. What plans have you to fly in, own or operate an aircraft during the next 12 months?

- 11. Do you intend to fly in a privately owned or company owned plane?.....If so, give
 - a. License classification and experience of pilot
 - b. Number of flying hours credited to him.
 - c. Over what kind of terrain will you probably fly?
 - d. Type of ship and facilities for servicing it.

- 12. Kindly enter here any additional information you may care to submit.

I hereby declare that all the statements and answers to the above questions are complete and true, and I agree that they shall form a part of my application for insurance dated.....
Dated at.....the.....day of.....192

Witness.....
Applicant's Signature

EXHIBIT 6

- 1. What is the nature and extent of your interest in or connection with Aviation?

- 2. a. Are you a licensed pilot? a.
 - b. What kind of a license do you hold: (Private, industrial, limited commercial or transport?) b
 - c. U.S.license? c.
 - d. Date of issue d.

- 3. In what years did you hold a pilot's license?

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EXHIBIT 6 (Continued)

4. Have you had any training either as an observer or pilot? (describe)
5. Have you ever made a flight either as a pilot, passenger, or in any other capacity? If so, enumerate the number of flights in the past three years.

Types of aircraft	No. hours flown between 1 hr. before sunrise and 1 hr. after sunset	No. hours flown between 1 hr after sunset and 1 hr. before sunrise	Where flying took place	Purpose of flights

By whom observed

6. When did you make the last flight?
7. How many hours of solo flying have you done?
8. Do you own or do you have the use of an aeroplane or do you contemplate the purchase of an aeroplane? (describe make of aeroplane and year of manufacture)
9. By whom is the aeroplane inspected and how often?
10. What has been the average length of your flights?
11. Have you ever been called upon to make a flight under unfavorable weather conditions.
12. Have you ever done or do you intend to do any of the following?
 - a. Instructing in flying a.
 - b. Testing of aircraft b.
 - c. Sky-writing c.
 - d. Stunting d.
13. Is your flying done in connection with business, advertising, the carrying of passengers, or pleasure ?

100

SCHEDULE 6 (Continued)

14. Have you any intention of making a flight in the future?
15. Do you intend to make any contest flights, or trans-continental, trans-oceanic, polar or any other long flights?
16. Have you ever been in an aeroplane accident? (If so give details)
17. Additional details

I hereby warrant and declare that my statements and answers to the above questions, and to the questions printed on the reverse side hereof, are full, complete and true without evasion or concealment and I agree that this questionnaire shall form part of my application for insurance to the.....Life Insurance Company and the above answers are made by me to obtain said insurance.

Dated at.....this.....day of.....19...

Witness:

.....
Applicant

EXHIBIT 7

The following statements and answers to questions are supplementary to my application for insurance in.....Life Insurance Company, under date of....., and said statements and answers are as much a part of said application, and shall be of the same force and effect, as if embodied in said application.

PASSENGER

1. Do you expect to make airplane flights as passenger?.....
2. (a) From what Airport?.....(b) How often?.....
3. (a) For business?.....(b) To save time?.....
(c) For advertising purposes?(d) For pleasure?.....
4. (a) How many flights have you made in the last twelve months?..
(b) Destinations?.....
(c) Over what transport lines?.....
5. (a) Will you fly at night?.....(b) Over lighted ways?.....
6. (a) If a private plane, by whom is it owned?.....
(b) Give license number.....(c) Is the fuselage of wood or metal?.....
(d) Is the pilot licensed?.....(e) What rating?.....
7. Are you an inactive pilot who flies as passenger?.....

THE HISTORY OF THE

REIGN OF

CHARLES THE FIRST

BY

JOHN BURNET

OF THE UNIVERSITY OF OXFORD

IN TWO VOLUMES

LONDON

Printed by J. Streater, at the Sign of the Gun, in St. Dunstons Church-yard, near St. Dunstons Church, in the City of London.

1679

EXHIBIT 7 (Continued)

PILOT

8. Do you expect to make airplane flights as pilot?.....
9. To what class of pilots do you belong?.....
 - (a) Transport.....(b) Limited commercial.....
 - (c) Private.....(d) Army, Navy or Marine.....
 - (e) National Guard.....(f) Reserve Airplane.....(g) Reserve Jr. airplane.....
10. (a) If a Reserve or National Guard pilot, when does your term of service expire?.....
(b) Do you intend to accept reappointment?.....
11. (a) Are you licensed?.....(b) What rating?.....
(c) Give number.....
12. When and where did you receive training?.....
13. Do you instruct students in flying?.....
14. (a) What airport is your base....(b) Do you fly cross-country?..
15. (a) State briefly your flying experience.....
(b) Give approximately total of hours flown.....
(c) How many in the last twelve months?.....
(d) In the last 60 days?.....
16. (a) Do you own your plane?.....(b) Give license number.....
17. (a) What plane do you fly?.....(b) Is the fuselage of wood or metal.....
18. (a) Do you wear a parachute?.....
(b) Are the planes you use equipped with crash pads?.....
19. Do you expect to increase or decrease your flying?.....

I further certify that I am in good health.

Dated this.....day of.....19..

Witness to Signature of Applicant	Signature of Applicant in His Own Proper Handwriting
.....

EXHIBIT 8

With reference to my application for life insurance dated the.....day of.....19...., I submit the following particulars which I hereby declare to be complete in every respect to the best of my knowledge and belief, and that no material information has been withheld or suppressed and I agree that this declaration and the aforesaid application shall be the basis of any policy issued to me by.....Life Insurance Company.

EXHIBIT 8 (Continued)

1. (For passenger only) My flying experience is as follows:

(a) Date of flight	Route	Name of Transporta- tion Co.	Type of Aircraft used	Any night flying?	Purpose of flight
--------------------	-------	------------------------------------	-----------------------------	----------------------	----------------------

(b) If a large number of flights have been taken, give separately for each of the past three years the number of flights and the yearly mileage.

19.....
19.....
19.....

(c) If you use other than regular air transport companies flying over scheduled airways, describe fully kind of planes and routes used, extent of this flying, conditions surrounding it and the purpose.

2. (For pilot or passenger) My past and present connection with aviation has been and is as follows:.....

3. (For pilot only) I have held and/or hold the following described licenses to pilot aircraft:.....

Description of license	By whom granted	Date when granted	Whether now current and valid
---------------------------	--------------------	----------------------	----------------------------------

4. (For pilot only) My experience in piloting aircraft is as follows:

Types of aircraft	No.hours flown be- tween 1 hour after sunset and 1 hr.before sunrise	No.hours flown be- tween 1 hour be- fore sun- rise and 1 hour after sunset	Where fly- ing took place	Purpose of flights	By whom observed
----------------------	--	---	---------------------------------	-----------------------	---------------------

I have not had any accidents involving damage exceeding \$500 to the aircraft
I have piloted or to myself or third parties, except as follows:

5. (For pilot only) Names and addresses of all past and present employers who have employed me as a pilot:.....

6. (For pilot or passenger) I contemplate making flights only in accordance with the following particulars:

- On the following types of aircraft:.....
- State whether the aircraft used will be only of thoroughly approved type or whether they may contain any experimental or untried features of design or construction:.....
- Flying only within the following geographical limits (specify precisely):.....
- Flying only for the following purposes (Specify precisely)...
- If a passenger only, state if possible name and address of aircraft upon which flying will be done and name and address of pilot who will navigate the aircraft:.....

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DIVISION OF THE PHYSICAL SCIENCES
DEPARTMENT OF CHEMISTRY

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DEPARTMENT OF CHEMISTRY

EXHIBIT 8 (Continued)

7. (For pilot or passenger) State whether the following forms of flying will be done:
 (a) Racing.....
 (b) Testing of new aircraft.....
 (c) Flying between one hour after sunset and one hour before sunrise.....
 (d) Flying beyond five miles from shore (If flying beyond five miles from shore is contemplated, state route).....
8. (For pilot or passenger) Space for additional information to cover fully all possibilities not stated above in respect to flying which may be undertaken:.....

Dated this.....day of.....19....
at.....
 (State postal address)
 Signature.....

EXHIBIT 9

1. Have you ever made a flight as a passenger, pilot, or in any other capacity?.....
2. If Item No. 1 answered in affirmative, please list number of flights and number of hours in air during past three years in spaces below.
 (Give each year separately)
- | Year | Number of flights | Number of hours in air |
|-------|-------------------|------------------------|
| | | |
| | | |
| | | |
3. When did you make your last flight?.....
4. How many flights do you expect to make during the next twelve months?.....
5. How many hours do you expect to spend in the air in next twelve months?.....
6. What is the purpose of these flights? (Business or pleasure).....
7. Do you own or do you have the use of a flying machine?.....
8. Are you a licensed pilot?....When did you receive your license?...
9. Do you fly as a pilot?.....As a passenger?.....
10. Do you engage in acrobatic or "stunt" flying?.....
11. Do you engage in exhibition flights?.....
12. Do you make test flights?.....

THE UNIVERSITY OF CHICAGO

DEPARTMENT OF CHEMISTRY

RESEARCH REPORT

NO. 1000

1950

THE UNIVERSITY OF CHICAGO

DEPARTMENT OF CHEMISTRY

RESEARCH REPORT

NO. 1001

1951

THE UNIVERSITY OF CHICAGO

DEPARTMENT OF CHEMISTRY

RESEARCH REPORT

NO. 1002

1952

EXHIBIT 9 (Continued)

13. Are you a member of any Military Aviation, or Naval Aviation organization? (If National Guard, Army or Navy Reserve, please specify which).....
14. If flying as a passenger, do you use established passenger carrying lines exclusively?.....
(Give details).....

Date..... (Signature of Applicant)

EXHIBIT 10

(To be answered by applicant if he has taken aerial flights as a passenger only. If he has ever acted as pilot, form O-151 should be completed)

1. How many flights have you take as passenger? 1927...1928...1929...
2. Did you fly in a licensed plane with a licensed pilot? If not, give details.....
3. Were flights made from an established airport?.....
4. What was the average duration of these flights?.....
5. Were they made around the field or were they cross country trips?.....
6. Approximately how many flights per year do you expect to make in the future?.....
Will they be business or pleasure trips?.....
Will a licensed plane and pilot be used?.....
Will landings be made on regular established landing fields?....
7. Have you any intentions of owning a plane or learning to fly or engaging in aviation in any other capacity in the future? Give details.....

I AGREE that the above statements are true and that they shall form part of my application for insurance dated.....
Dated at.....this.....
day of.....19....

.....
Applicant

.....
Witness

THE FIRST PART OF THE HISTORY OF THE
REIGN OF HENRY THE SECOND
BY JOHN GILBERT FROTHINGHAM
OF THE BARRISTERS AT LAW
IN THE MIDDLE TEMPLE
LONDON: PRINTED BY J. JOHNSON, ST. PAULS CHURCH-YARD, 1795.

THE SECOND PART OF THE HISTORY OF THE
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OF THE BARRISTERS AT LAW
IN THE MIDDLE TEMPLE
LONDON: PRINTED BY J. JOHNSON, ST. PAULS CHURCH-YARD, 1795.

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IN THE MIDDLE TEMPLE
LONDON: PRINTED BY J. JOHNSON, ST. PAULS CHURCH-YARD, 1795.

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OF THE BARRISTERS AT LAW
IN THE MIDDLE TEMPLE
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BY JOHN GILBERT FROTHINGHAM
OF THE BARRISTERS AT LAW
IN THE MIDDLE TEMPLE
LONDON: PRINTED BY J. JOHNSON, ST. PAULS CHURCH-YARD, 1795.

EXHIBIT 11

SUPPLEMENTAL TO AND A PART OF APPLICATION TO_____.

.....LIFE INSURANCE COMPANY, for INSURANCE ON MY LIFE,
DATED THE.....DAY OF.....19....

1. Do you make a practice of flying as a pilot or passenger; for pleasure or for business purposes?.....
2. List the number of flights and number of hours flown during the past three years (Give each year separately).....
3. About how often do you expect to fly within the next twelve months?.....
4. Do you own a plane?.....
If so, of what make?.....
How frequently and how thoroughly is it inspected and by whom?.....
5. Are you a licensed pilot?.....
If so, of what class and when did you receive your license?..
.....
6. Do you engage in acrobatic, exhibition or stunt flying?.....
7. Do you ever or do you intend to make test flights?.....
8. Are you a member of or do you intend to join any Military Aviation or Naval Aviation Organization? Please specify.....
9. Do you intend to give or receive instructions in flying?.....
10. Do you ever fly at night or under unfavorable weather conditions?.....
11. Do you intend to make any contest flights or engage in transcontinental, transoceanic, polar or any other long distance flying?.....
12. Is your flying confined to established air routes?.....
If over water, is your flying done more than five miles from shore?.....

DATED THIS.....DAY OF.....19..
AT.....

.....
Signature of Applicant

101

EXHIBIT 12

1. What is the nature and extent of your connection with or interest in aviation?.....
2. Have you ever made aircraft flights either as pilot or passenger?.....
 - a. Give the number of flights you have made during the present calendar year and the approximate number made in each of the preceding four years.
 - (1) As passenger in 19..?...In 19..?...In 19..?...In 19..?..
 - (2) As pilot in 19..?...In 19..?...In 19..?...In 19..?..
 - b. State approximately the average length of your flights during the past twelve months.....
What was the maximum distance flown?.....
3. If future flights are contemplated, state the purpose for which they will be made.....
4. When flying as a passenger, will you use established transport lines exclusively?.....
If not, give full particulars as to the type of machine that will be used, whether or not it is licensed, qualifications of pilot, and the name and address of the owner, if possible.....
5. Do you own or have the use of an airplane?.....If so state:
 - a. What type and whether licensed?.....
 - b. How frequently and by whom it is inspected?.....
 - c. Name and rating of airport used as a base?.....
6. State the geographical limits within which your flying will be done.....
7. If you have ever acted as a pilot, when and where did you receive your training?.....
8. Describe briefly your course of training, including length of time spent, type of machines used, qualifications of instructors, etc.....
9. Are you a licensed pilot?.....If so, describe your present license as to class and date of issue.....
10. Approximately how many solo hours have you flown?.....
In what connection was most of this flying done? (Specify whether U. S. Army, Navy, Air Mail, etc.)
11. Do you contemplate any of the following forms of flying?.....
If so explain fully.
Stunt flying?.....Testing of new aircraft?.....Transcontinental flying?.....Night flying?.....Instruction of students?.....Racing?.....
12. Do you intend to receive instructions in operating an airplane?....
13. Are you engaged or do you expect to engage in aviation in any way

EXHIBIT 12 (Continued)

not covered above?.....
If so, explain fully.....

I AGREE that the above statements are true and that they shall form part of my application for insurance dated.....
Dated at.....this.....day of.....19.....
.....
Witness Applicant

EXHIBIT 13

I hereby submit to.....Life Insurance Company, answers to the following questions, and I hereby agree that these answers shall supplement those made in my application for \$.....of insurance on the.....day of.....19...and shall be a part of said application which is to be considered as a part of any contract of insurance issued under said application.

1. What is the approximate total number of aircraft ascensions that you have made?
2. How many aircraft ascensions did you make during the past twelve months?
- 3a. On how many of these flights did you travel as passenger over scheduled air lines?
b. Between what airports?
c. Over what air transport lines?
d. In what types of airplanes did you travel?
- 4a. How many of the aircraft ascensions made during the past twelve months were unscheduled flights?
b. For what purpose were they made
c. What was the usual elapsed time of these flights?
d. In what types of airplanes did you fly?
5. Are you now, or have you ever been a licensed air pilot?
6. Have you ever piloted an airplane?
7. Have you any present intention of qualifying as an airplane pilot?

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840. 84

EXHIBIT 13 (Continued)

8. Do you now own, or have you any intention of owning an airplane?
- 9a. Are you connected with aviation section of any Government Reserve Corps or the National Guard Air Service? a.....
- b. How many hours of military flying did you have during the past twelve months? b.....
- c. Were these all during your period of active service? c.....
- d. When does your commission or enlistment expire? d.....
- e. Do you intend to sever your connection at that time or will you continue in the service. e.....
- 10a. Is it your present intention to make aircraft ascensions in the future? a.....
- b. Do you expect to fly more than in the past? b.....
- c. Will you fly solely as passenger on scheduled air lines, or will you make other flights? c.....
- d. If you make unscheduled flights, for what purpose will they be made? d..... (If so, give full details)
- Dated at.....this.....day of.....19..
- Witnessed by.....Soliciting Agent.....Proposed Insured.....

EXHIBIT 14

With reference to my application for life insurance dated the day of 19 , I submit the following particulars which I hereby declare to be complete in every respect to the best of my knowledge and belief, and that no material information has been withheld or suppressed and I agree that this declaration and aforesaid application shall be the basis of any policy issued to me.

1. (For pilot or passenger) My past and present connection with aviation has been as follows:
2. (For pilot only) I have held and/or hold the following described licenses to pilot aircraft:
- | | | | |
|------------------------|-----------------|-------------------|-------------------------------|
| Description of License | By whom granted | Date when granted | Whether now current and valid |
|------------------------|-----------------|-------------------|-------------------------------|

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EXHIBIT 14 (Continued)

3. (For Pilot only) My experience in piloting aircraft is as follows:

| | | | | | | |
|-------------------|--|---|-------------------------|--------------------|------------------|---|
| Types of Aircraft | No. of Hrs. flown between 1 hour after sunset and 1 hr. before sunrise | No. of hrs. flown between 1 hr. before sunrise and 1 hr. after sunset | Where flying took place | Purpose of flights | By whom observed | I have not had any accidents involving damage exceeding \$500 to the aircraft I have piloted or to myself or third parties except as follows: |
|-------------------|--|---|-------------------------|--------------------|------------------|---|

4. (For pilot only) Names and addresses of all past and present employers who have employed me as a pilot:

5. (For pilot or passenger) I contemplate making flights only in accordance with the following particulars:
- (a) On the following types of aircraft.....
 - (b) State whether the aircraft used will be only of thoroughly approved type or whether they may contain any experimental or untried features of design or construction.....
 - (c) Flying only within the following geographical limits (specify precisely).....
 - (d) Flying only for the following purposes (specify precisely)....
 - (e) If a passenger only, state, if possible, name and address of owner of aircraft upon which flying will be done and name and address of pilot who will navigate the aircraft.....

6. (For pilot or passenger) State whether the following forms of flying will be done:.....
- (a) Racing
 - (b) Testing of new aircraft
 - (c) Flying between one hour after sunset and one hour before sunrise
 - (d) Flying beyond five miles from shore. (If flying beyond five miles from shore is contemplated, state route).....

7. (For pilot or passenger) Space for additional information to cover fully all possibilities not stated above in respect to flying which may be undertaken:

Dated this.....day of.....19....
at.....Signature.....

THE
RECORD
OF THE
PROCEEDINGS
OF THE
GENERAL ASSEMBLY
OF THE
STATE OF
NEW YORK
IN SENATE
AND ASSEMBLY
FOR THE
SESSION
BEGINNING
JANUARY 1, 1900
AND ENDING
JANUARY 1, 1901
PUBLISHED BY
THE
CLERK OF THE SENATE
AND
THE
CLERK OF THE ASSEMBLY
ALBANY: J. B. LEECH, STATE PRINTER.
1900.

EXHIBIT 15

1. Have you ever made a flight as a passenger, pilot or in any other capacity?.....
 2. If item No. 1 answered in affirmative, please list number of flights and number of hours in air during past three years in spaces below. (Give each year separately.)

| Year | Number of
Flights | Number of hours
in air |
|-------|----------------------|---------------------------|
| | | |
| | | |
| | | |
 3. When did you make your last flight?.....
 4. How many flights do you expect to make during the next twelve months?.....
 5. How many hours do you expect to spend in the air in the next twelve months?.....
 6. What is the purpose of these flights? (Business or pleasure)....
 7. Do you own or do you have the use of a flying machine?.....
 8. Are you a licensed pilot?.....When did you receive your license?.....
 9. Do you fly as a pilot?.....As a passenger?.....
 10. Do you engage in acrobatic or "stunt" flying?.....
 11. Do you engage in exhibition flights?.....
 12. Do you make test flights?.....
 13. Are you now or have you been a member of any Military Aviation or Naval Aviation organization? (If National Guard, Army or Navy Reserve, please specify which).....
 14. If so, when will your enlistment expire?.....
 15. If flying as a passenger, do you use established passenger carrying lines exclusively?.....
(Give details).....
 16. Do you intend to receive instruction in flying?.....
- Date.....
- Signature of Applicant.

EXHIBIT 16

My past and present connection with aviation has been and is as follows:

- No. 1. Are you a pilot?.....
- No. 2. Do you own an airplane?.....
- No. 3. If a pilot, give description of license, when and by whom granted, and whether now valid.....
- No. 4. In the past two years my flying has been as follows: (Give total number of flights per year, type of aircraft, and whether as pilot or passenger).....
- No. 5. In the future my intentions are to be connected with aviation only as follows, and I contemplate future flights only as herein described:

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CHICAGO, ILL. 60607

1968

1969

1970

1971

1972

1973

1974

EXHIBIT 16 (Continued)

(Give average number of flights per year, type of plane,
and whether as pilot or passenger).....

No. 6. I have not and do not intend in future to engage in stunt flying, racing, testing of new aircraft, night flying or overseas flying, except as follows:

My answers to the above questions are submitted with the understanding that the same are to be a basis of a contract of Life Insurance and to be a part of said contract, and I agree that if issued by the Company subject to such condition, said policy may provide in event of my death while engaged in aviation, either as pilot or passenger, or as a result of such participation, the amount payable under said policy shall be the total of premiums actually paid by me and no more.

Signed this.....day of.....,1928

WITNESS:

EXHIBIT 17

This blank is to be filled out by Applicants in connection with whose Application the question of possible AERONAUTICAL activities arises.

1. a. How many flights have you taken? a.
b. How many of these were during the past two years? b.
c. How many within the past six months? c.
d. When (approximately) was the last flight? d.
e. Were they taken as passenger, observer or pilot? e.
f. Were they for business or pleasure? f.
g. Were they made in planes flying regularly between established airports over a scheduled air transport route? (If not, give full details) g.
2. a. Do you hold a pilot's license? a.
b. Have you had, or do you contemplate, any training in operating an aeroplane or airship? b.
c. Do you own an aeroplane, or contemplate ownership? c.

EXHIBIT 17 (Continued)

3. a. Are you an active or inactive member, or have you ever been such a member of the Government Air Reserve Force, or of an Aeronautical Club? (Give full details) a.
- b. Are you now or have you ever been employed by or connected with a business manufacturing, selling or operating aeroplanes? (If so, state when and in what capacity) b.
- c. Does the business with which you are connected maintain an aeroplane for use of its Officers or employees? c.
4. To what extent do you contemplate making use of an aeroplane and in what capacity?

I hereby agree that the foregoing answers are full, complete and true and together with the questions shall form a part of an application for insurance made by me to the.....Life Insurance Company on.....and I hereby renew and confirm my agreement therein.

Dated at.....this.....day of19.....

Witness.....Applicant.....

EXHIBIT 18

I,....., do hereby request that the undernoted additions be made to my application for assurance to and in.....LIFE ASSURANCE COMPANY, and I hereby agree that these are to be of the same effect as if contained in the original application.

1. Are you a member of the Aviation Corps of any Military or Naval Organization?.....
2. Are you a Reservist of any Aviation Corps?.....
3. Are you a member of an Aero or Aviation Club?.....
If not, is it your intention to join one?.....
4. Are you connected with any firm or corporation interested in this business commercially or otherwise?.....If so, give full particulars.....
5. Does the business with which you are connected maintain an aeroplane for the use of its officers or employees?.....

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO
CHICAGO, ILLINOIS
JANUARY 1, 1900

THE UNIVERSITY OF CHICAGO

CHICAGO, ILLINOIS

THE UNIVERSITY OF CHICAGO
CHICAGO, ILLINOIS
JANUARY 1, 1900

EXHIBIT 18 (Continued)

6. (a) How many flights did you take in the past twelve months?....
(b) How many in the past twenty-four months?.....
(c) Were these flights made in planes flying regularly between established airports over a scheduled air transport route?....
(d) Did you take these flights as passenger or as pilot?.....
(e) If these flights were not made in planes flying regularly between established airports over a scheduled air transport route,
(1) Between what points were they made?.....
(2) Who owned the planes?.....
(3) Were both pilot and plane licensed?.....
(4) What was the purpose of these flights?.....
7. (a) How many flights do you expect to take in the next twelve months?.....
(b) Will these flights be taken as a passenger or as pilot?.....
(c) Between what points and in whose planes will these flights be made?.....
8. (a) Do you hold a pilot's license?.....
(b) Have you ever had any training in operating an aeroplane or have you any intention of taking such training in the future?.....
(c) Have you ever taken any flights as a pilot or have you any intention of so doing in the future? Give full particulars.
(d) Do you own an aeroplane or have you any intention of becoming an owner of one?.....
9. Do you ever engage in any exhibition flying, including stunt flying of all kinds, or parachute work, or have you any intention of so doing?.....
10. Enumerate any other aerial activities in which you engage or may engage which have not already been described in the preceding questions.....

Dated at.....this.....day of.....192..
.....
Witness Applicant

The following information is desirable:

- (a) Number of aircraft ascensions made in the past and the number made in the year preceding date of application.
(b) If flights have been over authorized passenger air routes or if with pilot who takes up passengers on short flights for pleasure.
(c) If ascensions were made as passenger or pilot.
(d) Usual elapsed time of each flight.
(e) Type of aircraft employed for flights.
(f) If applicant has pilot's license or intends to apply for one.
(g) Future intentions of applicant in regard to aircraft ascensions
(h) If applicant has any intentions to act as a pilot.

THE UNITED STATES OF AMERICA
DO hereby certify that
[Name] is a citizen of the United States of America.

IN WITNESS WHEREOF, I have hereunto set my hand and the seal of the United States of America at [City], [State], this [Day] day of [Month], 19[Year].

JOHN D. [Name]
[Title]
[Address]

ATTEST:
[Signature]
[Title]

NOTARY PUBLIC
[Signature]
[Title]
[Address]

EXHIBIT 19

MAIL IN THIS APPLICATION WITH \$5.00 POLICY FEE AND ANNUAL OR SEMI-ANNUAL PREMIUM

12. If holding Aviation Pilots License or Certificate, please answer the following questions:
(a) Date of license or certificate and by whom granted?.....
(b) No. of license or certificate?.....(c) Date of expiry of license or certificate?.....
(d) Are you licensed or certified thereby to carry the public for hire or reward?.....
(e) In respect of what types of aircraft is the license or certificate granted?.....
13. If you hold a Certificate from an Aero Club or from the Federation Aeronautique Internationale, what is the number and date of Certificate and by whom granted?.....
14. Are you flying for your own account or on behalf of an employer? (If the latter, state name and address of employer).....
15. What flying experience have you had? (State types of aircraft and hours flown in respect of each type).....
16. What is the exact nature of the flights as to which you desire the insurance to be limited?.....
- * * * * *
21. (a) Will your flying be confined to the types of aircraft of which you have had experience as shown in answer to Question No. 15?.....
(b) If not, what are the types which you contemplate flying in addition to those stated in answer to Question No. 15?.....
22. Will flying be.....
limited to Make type and Owner H.P.and No.passengers in addition
one or more age of aircraft make of to pilot aircraft is
 engine built to carry
- specified craft.....
If so, give
the following particulars:
23. Do you understand and agree that, unless specially arranged for and specified herein, this insurance shall not cover injuries received during or in consequence (a) the use of an aircraft for purposes other than those specified in this application, (b) the flight of a newly constructed aircraft, or of an aircraft in which any material change or alteration in the construction, material or parts thereof, or in the type of engine used therein, has been made, if such flight is undertaken prior to said craft having made a complete circuit in the air and a successful alighting without accident, (c) descents upon water in case of a land alighting aircraft, of descents upon land in the case of a marine aircraft except in case of accident, (d) practice in or exhibitions of up-side-down flying, looping the

EXHIBIT 19 (Continued)

the loop, spinning, rolling, contour chasing or other trick flying, (e) racing, pacemaking or speed testing, (f) flying between one hour after sunset and one hour before sunrise, standard time of the place of flying, or (g) flying beyond five miles from shore in the case of a seaplane, or flying beyond one mile from shore in the case of any other aircraft, measured from high water mark?.....

* * * * *

Policy applied for this.....day of.....19...
Signature of applicant.....

NOTE: When applicant is a passenger, answer question 1 to 11 inclusive and 16, 17, 18, 19, 22, 23, 24, and 25. When applicant is a pilot, operator or member of crew, answer all questions.

EXHIBIT 20

I hereby make application for Insurance in.....
Insurance Company, hereinafter called the Company, based upon the following statements:-

Name.....Age.....

Height.....Weight.....

Address: Street.....City.....State.....

1. Beneficiary?.....Relationship?.....

2. My occupation is (Describe fully).....
Time in air?.....hours.

3. If transport pilot, when did you receive license?.....

4. Mail pilot?.....How many years?.....

5. Have you ever been cited for reckless flying?.....If so, when?....

6. Have you ever been cited for violation of the Department of Commerce Regulations?.....

7. Has your license ever been revoked?.....

8. By whom are you employed?.....How long have you been so employed?.....

9. Are you required to do night flying?.....

10. Do you operate unlicensed ships?

EXHIBIT 20 (Continued)

11. Do you hold a mechanics license?.....When were you so licensed?.....
12. Have you ever been involved in any accident?.....If so, state fully.....
13. Do you use propeller guard when testing Motors on Block?.....
14. Do you wear colored goggles when welding?.....
15. Is amelite used to cover wings in your shop?.....
16. Do you fly with Pilot testing motors or planes?.....
17. Do you contemplate any long distance or endurance flights exceeding two thousand miles?.....If so, will you advise Company and secure permission?.....
18. Is muriatic acid used in your shop?.....

I do hereby agree that my monthly indemnity under this policy does not exceed 75% of my salary or income which is approximately \$.....per month.

Dated this.....day of.....1929

.....
Assured

EXHIBIT 21

15. ARE THE ANSWERS TO THE QUESTIONS IN THIS APPLICATION YOUR OWN ANSWERS and do you understand and agree that the right to recovery under any Policy which may be issued upon the basis of this application shall be barred in the event that any one of the foregoing statements, material either to the acceptance of the risk or the hazard assumed by the Company, is false, or in the event that any one of the foregoing statements is false and made with intent to deceive, and do you further agree that this application shall not be binding upon the Company until accepted by the Company and a Policy actually issued?.....
16. Do you do any night flying?.....What kind of a ship do you fly, or expect to fly?.....
17. How is it powered?.....Do you wear a chute when flying?.....

Dated at.....this.....day of.....19.....

SIGNATURE OF APPLICANT.....
(Mailing address)

Principal Sum \$.....Weekly Accident Benefit\$.....Class.....
Annual Premiums\$.....Amount Paid\$.....
Number of Pilot's F.A.I. License.....Department of Commerce
License Number.....

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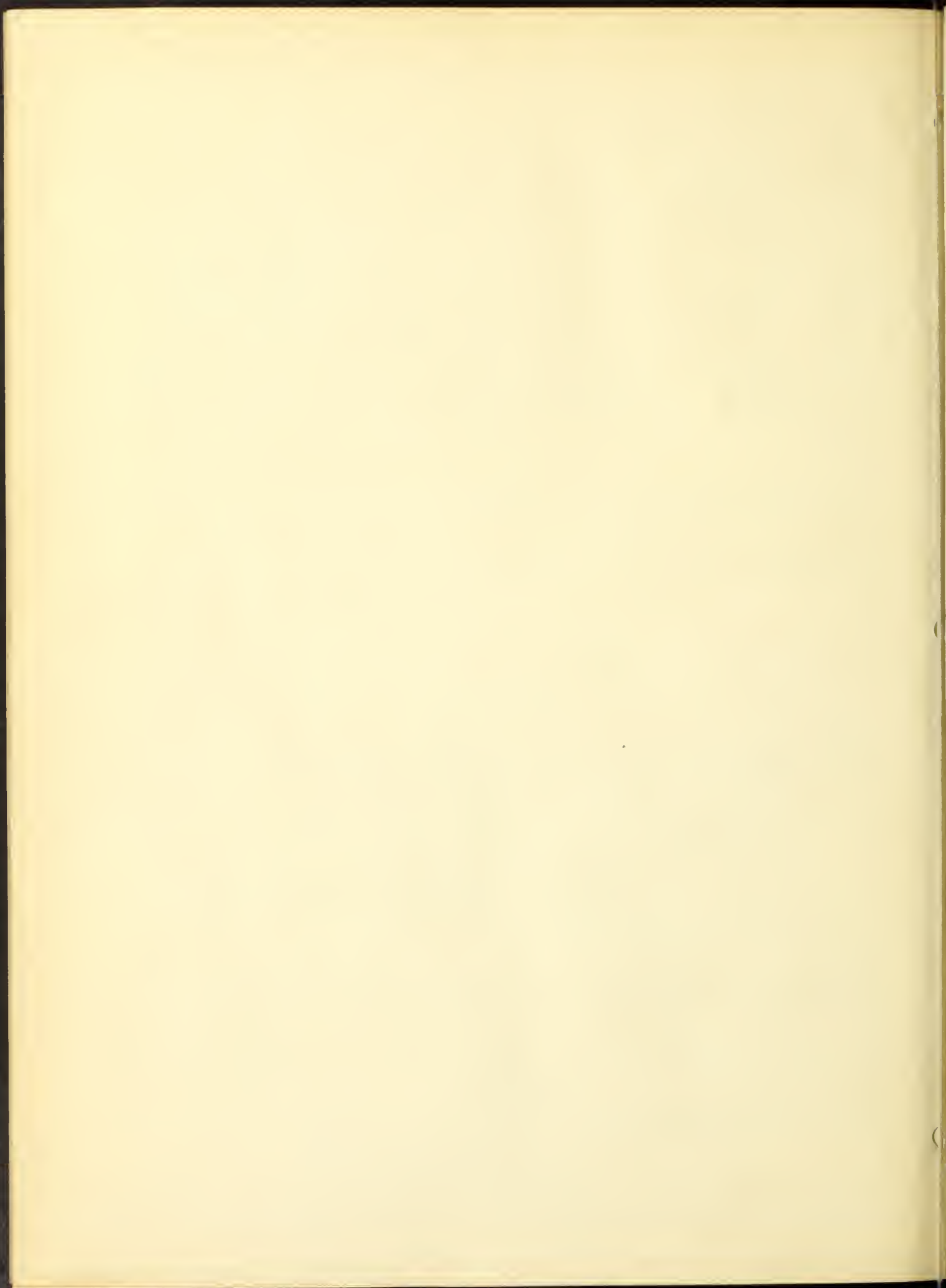
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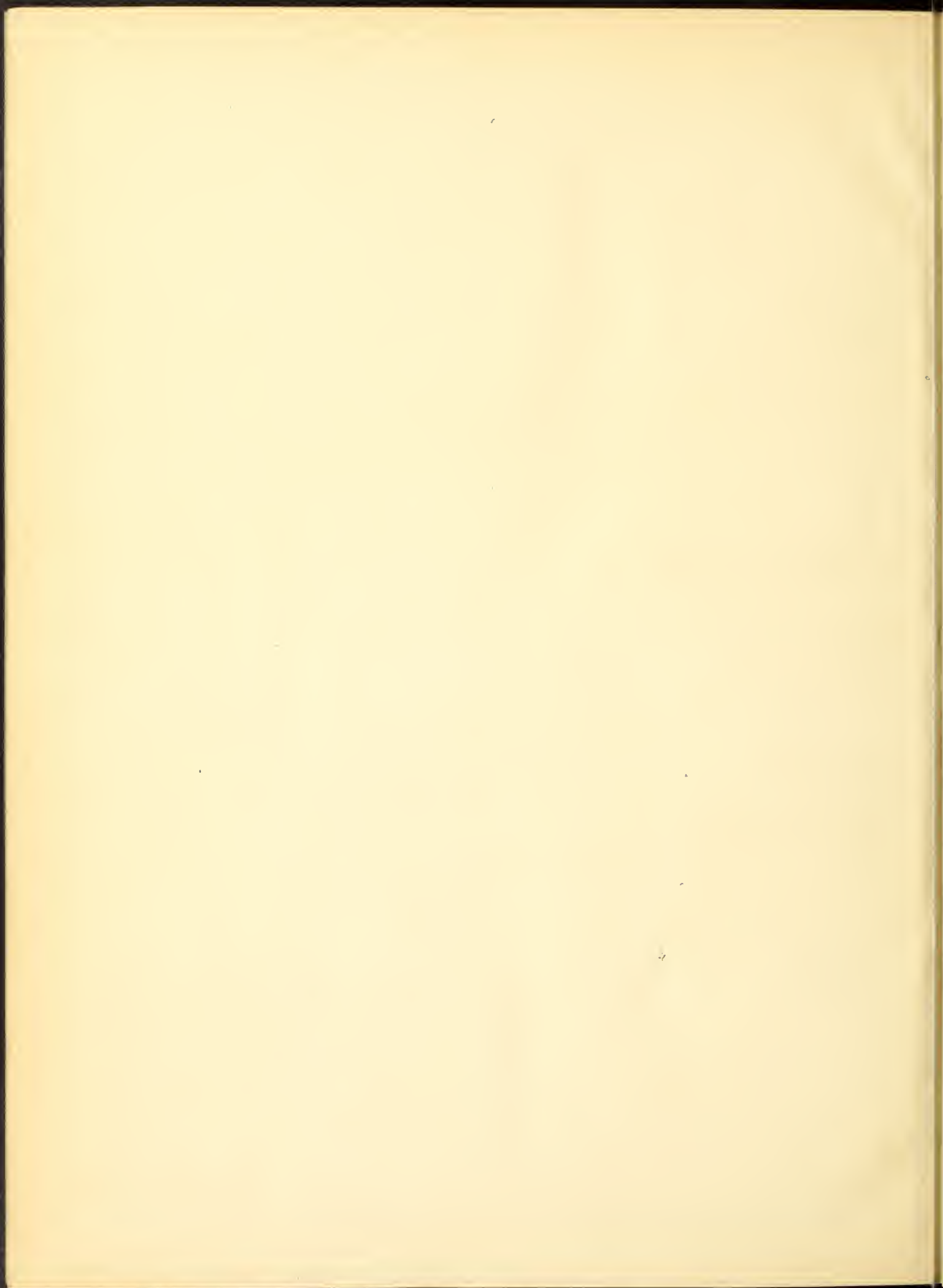
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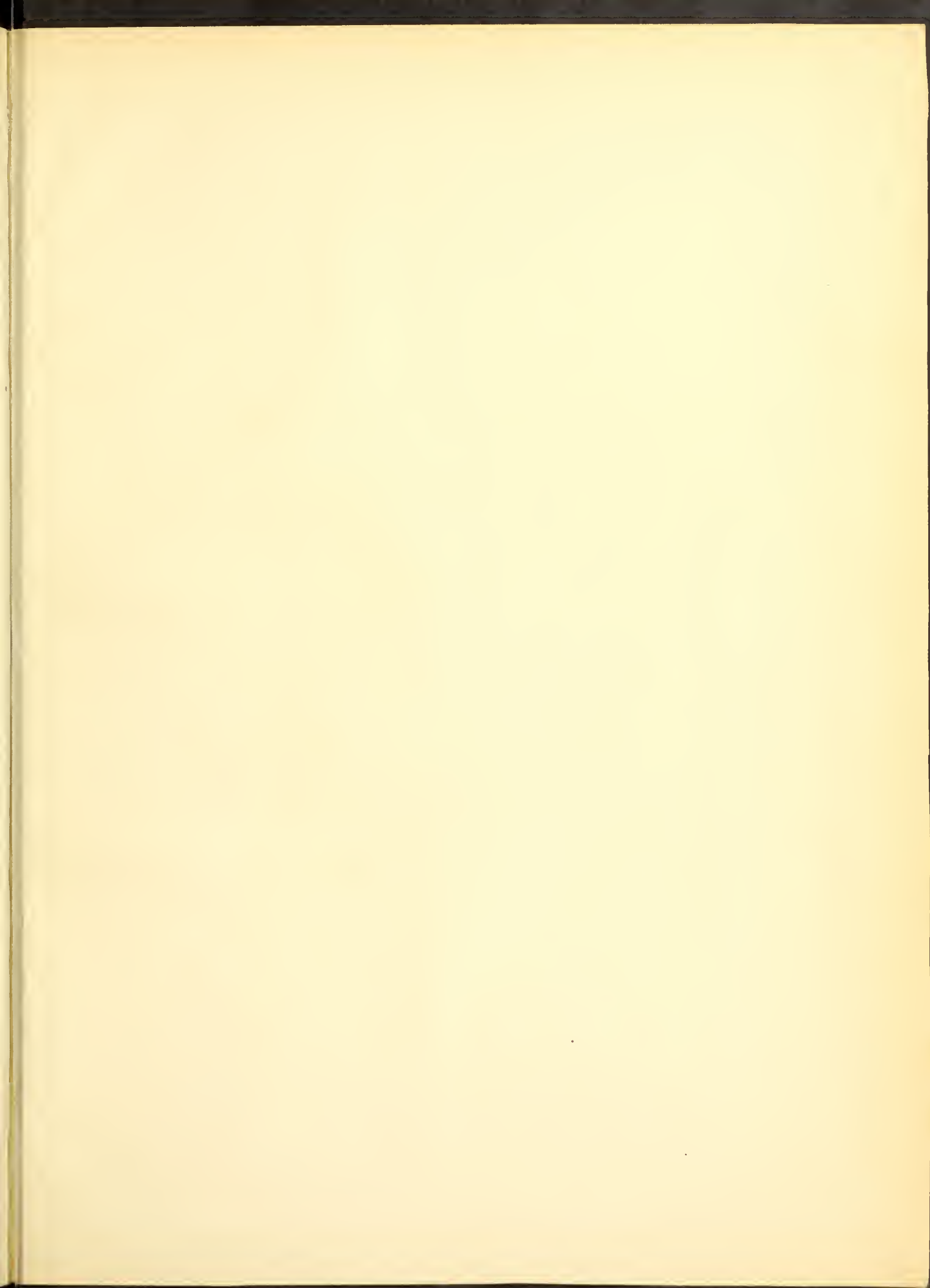
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not to be taken from the 32nd

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| Insurance and aviation | |
| DATE | ISSUED TO |
| 10-25-10 | W. D. D. |

BOSTON UNIVERSITY



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